

No. 9.







# Wild-cat Grade (Humboldt Co)

- Giant Cedar- trees 75 ft high, the branchlets drooping in a close bunch-like form <sup>↑ spray-like</sup> as if the tree was wilted!

- [Ferndale is a very neat clean town - a beautiful town for this country - it has prettier houses than Arcata but not as showy a business center.]

- There is a big island in the lower Sal - suggestive of the islands of the Lower Sacramento. The people make money and the farms show it.

Camped on Wild-cat grade a mile below summit at an abandoned house. Good camping spot, wood, water, feed for horses. The horses while eating barley look bright the next am. and Mr. G. had a 3-mile chase.

## Aug 2, 3, 1902.

- We are within sound of the ocean's roar. There is a way to get to Petrolia by the Ocean Beach - at low tide it is just driving - but wary me, friends & strangers, dissuaded us from taking it on account of pulling in the heavy sand.

- Giant Cedar, photo by Mr. G. near camp place.

- The "herbaceous jungle" of *Pteris aquilina*, *Thimble Berry*, *Gaultheria* <sup>(Chelone)</sup> (with *Epilobium spicatum* rising above it) rises above one's shoulders.

- We are now on Wild-cat grade over Bear River range to Cape Mendocino.

- Tan Oak - at summit - going down below road to get it - (passed through the herbaceous jungle of *Pteris aquilina*, *Thimble Berry*, etc. looked a foot high, with in over my head) - two Tan Oaks. 24 x 15 ft. h., very moss-covered, saw no more - did not recognize them for certain at

- Maple - ancient-looking tree, 300 yds. long with black lichens, rising out of jungle

- Red Bulbous 7 ft. h. } of brush on Bear Summit Bear River range

- Fog - rare on Bold mt. } River Range, very decrepit, only a few. Crowded out?

- Douglas Spruce condensed fog; drops in road dust like heavy shower. Under

Rube parviflorus.



# Bear River Range to

Seedhead 20.  
No. 2141. *Godetia amoena* <sup>G. Don.</sup>

Spot on inside; fls very large and beautiful, abundant on the open grassy hills overlooking the ocean. See no. 2138 which was spotted outside and no. 2020 which had no spots at all. These plants near the ocean have far more showy flowers (= var. Lindleyi Jepson).

- In cañons running from the ocean up into the bare hills:  
*Abies grandis*, *Salix* Willow, *Holdingia discolor*,  
17 ft. h; Douglas Spruce,  
*Pinus rubra*.

- *Abies grandis*, 140 ft. h, 2½ or 3 ft diameter.

# Bear River, Aug, 3, 1902.

(Humboldt Co.)

*Luteolus* Kell.

[No 2142. *Scirpus* See next p. 8.]

Plant with main stem 13-18 in. h, terminating in a spike which flowers early (and is now about matured), lateral flowering branches developing profusely and spikes on them flowering in succession outward. Thus plants become 2 to 3 ft broad.

Flowers yellow; banner acute, about 20; note long curved persistent styles. Adobe hill, south exposure. - Near Capetown, Humboldt Co.

- Bare hills stretching away S. with Douglas Spruce, *Salix* Spruce + *Abies grandis* in the cañons and hollows, the "herbaceous jungle" thinning out around the areas.



Humboldt Co.Bear River & Capetown to

- Lunched at Capetown on Bear River
- No. 2133. *Angelica Hendersoni* - C. R. <sup>Lobelia</sup>
- ✓ No. 2134. *Gentiana Oregana* <sup>Lobelia</sup>
- No. 2135. *Cirsium* <sup>avenae</sup> ~~avenae~~ <sup>Trich</sup> ~~Trich~~ *Canada Thistle*. Lowlands about Eureka. Coll. on hill at ferry to Ferndale. 3-5 ft. h.
- No. 2136. *Arctium* <sup>leppa</sup> ~~leppa~~ <sup>var. tomentosa</sup> ~~gray~~ *burdock*. Hill near Ferndale. 5 ft. h.
- No. 2137. Giant Cedar. See back 4p
- No. 2138. Tan Oak. See back
- No. 2139. *Cirsium* <sup>collinsii</sup> ~~collinsii~~ *Thistle*. Bare hills overlooking ocean. 2 1/2 ft. h., widely branching from base or little branching, always with erect axis.
- No. 2140. *Layia* <sup>gaillardoides</sup> ~~gaillardoides~~ (N. & A.) DC. *gallardoides*. Ray 8, 9. With preceding
- ✓ No. 2141. *Oenothera* <sup>amoena</sup> ~~amoena~~ <sup>var. lindleyi</sup> *amoena*. See back 2p.
- No. 2142. *Lupinus*. See back, page 7.

Petrolia, Aug. 3, 1902

- *Canollins thoyisiflorus* - thicket, 20 ft. high, green tufts on tip - <sup>up</sup> ~~all~~ bare of foliage, stems tall, slender & many of them. Presented singular appearance - Capetown to Petrolia, near the former place.
- The hills seaward exceedingly bare - desolate looking.
- Cape Mendocino! { Sailors say the back-wash from Cape Mendocino is 100 mi. at sea !!!
- Never before <sup>saw</sup> such an acreage of thick Thistle as between Mendocino Light & Petrolia, near beach - Not far from Davis Creek.
- Where the road leaves the beach and follows into the hills far Petrolia - 1/4 mi from beach - growth of Buckeye - more than 2 acre. trees rather fine; no very sloping in flower; those on the seaward



# Petrolia Humboldt Co.

side show effects of storms.

- A little beyond - when we get a good view of the barren gulched and wrinkled hills - desolate appearance - meeting the roar of the ocean - is a farm house in a hollow - very pretty - screened behind a clump of Pepperwoods - the foliage very thick - and scrubby.

- *Vicia gigantea* Hook. See 13, 640.

No. 2143. *Astragalus pycnostachyus* <sup>Gray</sup>  
Ocean shore. *farinosa* Baker.

No. 2144. *Cotyledon* <sup>Dudleya</sup> *Candey* 3 to 5 in.  
high, very distinct, the flowering branches pronouncedly lateral. Covering the walls of vertical rocks along the beach.

No. 2145. *Grindelia*. Along ocean shore.

## Aug. 4, 1902.

*Eryasopifolia* B.

No. 2146 *Lathyrum* Petals pink, oblong obovate,  $1\frac{1}{4}$  or  $1\frac{1}{2}$  lines long, one fl. with 6 petals + 6 sepals. Petals opp. sepals, + between sepals there are low-triangular lobes! very distinct + clearly marked structures.

Stream-bed *Petrolia*

- Pepperwood <sup>leaves</sup> - very fine trees along Mattole River

- *Petrolia* is a little village of 2 stores + hotel, post office, saloon, and half-a-dozen houses, lying in the small narrow valley of the Mattole River.

No. 2147. *Populus* <sup>trichocarpa! T. & G.</sup> Largest leaves I ever saw. From medium-sized trees, 4 mi or so above *Petrolia* on Mattole River. Tree exceedingly beautiful except the very white under surface + green upper surface. Sheds in the wind once.



## Mattole River

- Buckeye, inf. near Petrolia  
8 ft 3 in at 2 1/2 ft, smallest  
portion of trunk; trunk perfect;  
with a single trunk not  
composed of 2 or 3 or low-  
branching; branching at  
5 1/2 ft: tree 30 ft. h. Other  
trees near with longer but not  
so perfect trunks.

- *Populus trichocarpa* - 19 ft at  
5 ft - 100 ft. high. Finest  
grove on river flat at town  
of Petrolia that I ever saw

- *Abies grandis* - 16 ft 3 in at 6 ft  
near Petrolia, 175 ft. h. Bark of  
middle-sized trees suggesting  
alder trunks.

Aug. 4, 1902.

- Along Mattole River - Douglas Spruce,  
Shaple (Large-leaved). Oregon Ash, one  
Tan Oak noted, Lowland Fir (other, as  
large as those measured, seen).

- *Ceanothus thyrsiflorus* - abundant in  
thickets - as tall as 22 ft.

- More Tan Oak on side hill.

- Plenty Tan Oak 4 or 5 mi. from  
Petrolia going south, some side  
hills with 15 ft. Tan Oak.

- We can look back to the bare hills  
next the ocean and see now that  
in protected hollows, the very  
protected palm of the hills,  
grow little mimic forests (in  
area size) of *Abies grandis* &  
Douglas Spruce.

- *Verbascum thapsus* - rather common  
in the Mattole country; also in the  
Eureka region.



## Mattole River to Wilder Ridge

- Pepperwood - tree 60 ft. high, very broad, habit of Valley Oak with sweeping branchlets 10 ft. long.
- Toyon in fl.
- Tan Oak in fl.
- Black Poplar, its leaves & their beauty. See under #2147.

<sup>America</sup>  
 - Garryana near Mattole School;  
 Black Oak also <sup>upper</sup> and Maul Oak  
 a mile beyond. Madrona at  
 Upper Mattole.

- Saxifraga peltata - upper Mattole

By Upper Mattole  
 is meant Upper Mattole School  
 - Maple (Large-leaf) on river  
 terraced plate, upper Mattole,  
 trees 40-60 ft. high, isolated,  
 shaggy, erect

Camp Aug. 4, 1902.

- Grade to Wilder Ridge: *Orealis* <sup>Oregon</sup> *Oregon*,  
 Wake Robin & Huckleberry came in  
 about 2 miles up. Also plenty  
 Tan Oak, fine trees.

Noted Tan Oak poles 40 ft. h., the  
 Madrona growing with them &  
 assuming its habit. Tan Oak  
 axis unbranched - just like  
 a young pine.

- Snow Brush\*, 20 ft. h., as if  
 to be a tree. - Wilder Ridge

- Wilder Ridge, fine Madrona, as fine  
 as I ever saw, growing with  
 Douglas Spruce & Tan Oak, forming  
 beautiful woods along the ridge,  
 - sometimes, but rarely, a bit of  
 prairie. Looking east from  
 the ridge to Fort Leonard Ridge

\* ? = *Ceanothus velutinus*.



## Fox's Spring

one can see the ridge separating Mattole from S Fork Val. It has great patches of brown prairie surrounded by forest, the contrast being striking, the prairies numerous.

- Kings Peak is the great mountain landmark of this region. It stands up, high above the neighboring ridges. It is the great mountain that we saw from the Blue Rock & Fort. Leward ridges, on the coast near Cape Mendocino and could get no name for it.

Our camp for the night at Fox's Spring was a naturally delightful spot but we got scarcely any rest on account of other campers who were moving about nearly all night. The spring is fine and one camper gave us half a carcass of deer which we appreciated very much.

Aug 4, 5, 1902

- Old peelings of Tan Oak on Inlder Ridge below forks of roads (Biscuit & Shelter Cove forks)\* One stump 6, 10 x 5, 10 (photo of log) sprouted on one side only; the older the tree the less vigorous as a rule the sprouting.

\* There is another fork further along on the Coast Road, to Shelter Cove - not to be confused. See Folder Map of Humboldt Co. by J.N. Lextell [1901]



## Foxs Spring to

- For miles & miles we ride through the most beautiful virgin forest of Land Oak, Madrona & Ringler Spruce.

The trees will be straight <sup>the latter</sup> as an arrow but the Madrona yields everywhere, gaining the same height often, but bending a long way this and a long way that to get its top to the light, its top very remote vertically from its trunk base. Beneath the forest is a little crackles and the ever-present Poison Oak - a few inches or a foot high.

## Ettersburg, Aug. 5, 1902

- Giant Madrona - at smallest part of trunk 16 in from ground = 24 ft 1 1/2 in.

At 4 1/2 ft = 22 ft, 1 in.

On south side is given practically at ground a great limb 4 ft. in diameter, this limb almost horiz. at all. At 4 1/2 ft the lake passed above this limb!

This limb 8 ft 6 in in circ at 8 ft. horiz. at all from main stump. Branches mainly at 10 ft.

(Main) Crown 99 ft. wide in longest direction. This is a tremendous tree. Undoubtedly the largest Madrona in California. It is moreover a most beautiful tree. The tree is on the land of - see next p.



## Ettersburg

- French & Pixton, Ettersburg, Pa.  
 These people own the land on  
 which the Big Madrona is  
 situated. The tree is at the  
 end of a hayfield on a plateau  
 - like portion of the ridge. The  
 road runs sharply down  
 the ridge to this hayfield.  
 The Madrone stands on a  
 little promontory at the  
 near end. Looking down  
 the ridge one is wonder-  
 fully impressed. I rubbed  
 my eyes. I thought it  
 must be an oak, a hawthorn  
 oak maybe, so big and  
 round. When we gets near  
 - and the tree is within

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60 ft of the road, we see that it  
 is the largest Madrona tree in  
 all California, large in its whole  
 stature, breadth of crown as well  
 as its height of 75 ft, its massive  
 trunk which is round & perfect  
 - not burned or decayed on one  
 side as so often the case. I have  
 seen remains of Madrona  
 stumps - perfect as mosaic  
 and have tried to imagine  
 what they once were. This is  
 the example!

I stopped at the French & Pixton  
 ranch house. The woman who  
 talked to me knew about the  
 Madrona. Yes she knew it was  
 a big tree but was surprised



## Ettersburg to

to know that it was the largest in all California. It has some local fame. It marks a corner between Supervisor districts; "one Supervisor claims as far as that tree as his district."

One can see it from across the Mattole River, ascending the opposite mountain. It is large to the eye from any point.

The woman who was a large slim type of country woman with fair complexion seemed to be proud that they owned the largest Madroño in California.

Brice land, Aug. 5, 1902.

- Cutting & peeling Tan Oak now in progress on grade up from Mattole River at Ettersburg. A little has been done in previous years. Doubtless they take only near wagon-road.
- Tan Oak poles, 80 ft. high, two measured at 3 ft from base: 2 ft 6 in & 2 ft 9 in.
- Maul Oak, 23 ft. circ. at 3 ft 4 in from ground (smallest part of trunk). Ninety or 100 ft spread branching rather low on one side. 75 ft. h. About 1 mile below summit, edge of road. After crossing Mattole River we go up grade for  $2\frac{1}{2}$  mi, then <sup>from summit</sup> along ridge.
- No. 2149. *Ceanothus incanus* T. & G.
- No. 2148. *Cirsium occidentale*



## Briceland

- There has been hot weather in this region: last week at Pixton two days  $120^{\circ}$  &  $122^{\circ}$ . In Hoopa it went up to  $112$ ; today we suffer severely from heat. Last night even at this altitude, our bed clothing was too warm.

- *Saxifraga peltata* - headwater Natchez R.

- Saw oak tree, we cut taken at least a year ago, bark gone all around cut; tree living, now in fl., but tree very sickly looking, scanty foliage, plainly dying. Saw many more like this on way to coast. Trees 60 ft. high had two cuts taken, the rest was out of reach and altho the tree held its diameter it was a pole & too small to cut.

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|             |        |                                                                                           |
|-------------|--------|-------------------------------------------------------------------------------------------|
| - Briceland | - 5 mi | } Taken from<br>signboard<br>at junction<br>Briceland &<br>Coast & Shelden<br>Ridge Road. |
| - Neal      | - 32 " |                                                                                           |
| - Petrolia  | - 35 " |                                                                                           |

- Vine Maple near Briceland & White Horn

- Chas. Wagner, Briceland.

This is the "old man" of the company that is starting the extractor at Briceland. It is evidently to be a first-class plant. It is located  $\frac{1}{4}$  mi. from Briceland. down stream. The works are now under way. In this remote region the company had nothing to work with and they found they had to manufacture before building. They have their own brick-yard and are now getting a kiln ready to burn. They are setting up



## Briceland

their own saw-mill and will cut the Douglas Spruce and Redwood a few feet away; they are building their own blacksmith shop, wagon shop, and carpenter shop. They have built a great shed 400 ft. long and 50 ft wide for storing the tan oak which is now being cut by a force of 75 men. They are not buying tan bark but buying the stumps. They will store about 3000 cords this season unless the peeling is suddenly stopped by hot weather; they will get in 2000 cords anyway. They offer 7.50 per cord

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to outsiders but won't get any at that price probably. The cord here is 2500 pounds. Wagner wants to utilize the oak wood, especially for barrels for his liquid tannin for shipment. He has been told the wood is too brittle for the purpose but intends to experiment with it in order to render it fit for use. Various lines of experiments may be tried. The wood has a great deal of sap in it and this should be gotten out, perhaps promptly by boiling maybe. Of course, Tan Oak is not cut for the wood but for the bark. So it was cut over the



## Briceland

wood it would be cut at a different season. It makes a great deal of difference when Douglas Spruce is cut. Wagner says the Tan Oak showing greatest percent of tannin comes from Monterey Co. - very thick bark there also. I think he said the bark from this place might show as high as 20% tannin. He had a ~~big~~ T-square in his office made from Tan Oak - a beautiful bit of office furniture.

Well, for one thing people are prejudiced against all California oaks. It is the thing to say:

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Oh, California oaks are no good - the wood is brittle. This will be said without proper testing.

Mr. G. says he made a mantle-piece (in Hupa) for his house of Tan oak and thought the result pleasing. He is an amateur carpenter, too.

One of the Hupa blacksmiths use White Oak and esteem it very highly for wagon-timber.

At McKees there is a school; the school is held in a little bit of a farm-building standing in a barnyard near a barn and on the edge of a road. The redwood lumber is unpainted & blackened by age. I took a picture but I could not take: "now 6 x 3. Go on. What is it?" of the neatly dressed school-mistress.



## Endsies to McKees to Scottsville to

[Starting by we came down from the Wilder Ridge to the Mattole & crossed it, ascending another ridge & following it to Endsies. Here we left the main road & go into Buelland 5 mi. Returned to Endsies & spent the night. Next morning went on to McKees. Where there is a branch road to Shelter Cove (12 mi), then on to Thom and White Thom. Crossed the Humboldt line into Mendocino, to Scottsville (formerly Gopherville) and on to Frenchis on the Coast Road. Took the branch down to Needle Rock]

No. 2150. *Castanopsis sempervirens* Dudley. Near McKees  
Stamens 7, 7, 8, 9. Shrubby  
trees.

## Needle Rock, Aug. 6, 1902

- Shipping, tan-bark 10 or 11 years.  
4000 cords - 1900  
1800 " 1901  
700 " 1902

- Needle Rock Co. here for 6 years.  
Will Thomas, H.B. Miner of the Co.  
- Culman & Salz of Benner  
Cutting in Jackson Valley  
2500 cords in 1901.

Harry Linnell, Sup't  
Ship from Westport.

Charley Gartner (a Jordan)  
Needle Rock

Has pictures of vessels

loading

- The shipping of tanbark at  
Needle Rock is light this year  
because of the price and because  
McKee ships from Shelter Cove.  
There is no harbor here; the



## Needle Rock

ship comes close in to the beach and takes up the rope of buoys and a float and the load goes down a "slute" on a wire; the highest slute on the coast.

- From Frenchis to Needle Rock is like jumping off into the Pacific Ocean; it is 3 miles but we do not go very far.

The fog furthermore gave the suggestion that we were likely to drop off the earth.

- [While Iham is an abandoned settlement. Deserted houses are numerous. To me such a country is pathetic.]

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- [Met a man on the road, intelligent looking resident. He did not know how long the standing tan oaks 1 mile back had been peeled, but he was dead certain they lived 4 or 5 years after peeling.]

- Teams hauling tan oak into Needle Rock, 4-horses, carry between 2 & 3 cords, sometimes 4 cords. Last year a cord at this place was 2500. This year they have increased it to 2600 pounds.

- [From near Meloe to Scottville & pretty well towards Frenchis there was great quantity of Redwoods. Magnificent trees, the forest scarcely touched



## Needle Rock to

except at Scottsville which appeared to be mostly a shake town. With the Redwood at White Thorn I noticed: Douglas Spruce, Madroño, Tan Oak, Chestnut (*Castanop. chrysop.*)

*Peanothus incarnus* is abundant all over this country. Saw great patches of it between Ellensburg & Endicott - drove through quarter-miles of it. It abounds all the way to White Thorn from Endicott. I would say this was its own country. The branchlets are white; only the older branchlets lose the white color or glaucous color. Moreover the leaves are light-colored. A good common <sup>name</sup> is used here: White Thorn. Bushes 10-13 ft. high.

## Bear Harbor, Aug. 6, 1902.

- Bear Harbor is down the coast 2 mi. from Needle Rock. There is a railway track + flat cars running into the redwoods but they appear to ship nothing now but ties + staves. Between Needle Rock & Bear Harbor one gets a fine notion of the grinding ocean. At Needle Rock the hills come flush down to the water, then we pass in behind a ridge which is being eaten, then the sea, then we pass behind another ridge which is shorn off so that only a sharp quarter of it <sup>it</sup> shows out the ocean. This is a graphic illustration



# Bear Harbor

- Effects of wind: Douglas Spruce on exposed hillside, facing ocean, might better be a Monterey Cypress if habit counted; remarkable simulation. Alders in sharp cut cañon running behind ridge (see prev. p.) - the wind streams in, its high velocity 10 to 15 ft. above bottom of cañon, depending on contour of cañon walls. The Alder (*A. Oregona*) have grown up to this line & then stopped, their heads as flat as if cut off with a scythe. They are peculiar on account of string limbs which come up to the line & on account of the variation in height of the different trees

Aug. 6, 1902.

- A point of land to the south <sup>projecting</sup> protects Bear Harbor somewhat. They load as at Needle Rock.
- Just before reaching Bear Harbor -  $\frac{1}{4}$  mi - a rock simulating remarkably a recumbent animal of the *Carnivorous* race rises out of the ocean near the shore.
- We came down off the Coast Road (or "County Road" as it is called here) to have Buck shod. Buck went lame this morning through interfering. There is no blacksmith this side of Westport, they say, unless possibly 45 or 50 mi away. It is a hard pull back up to the County Road. As steep as road for the distance as I ever experienced in California.
- A mile before reaching Pat Kenny's we hit the Coast Road. At Kenny's there is a branch to Garberville.
- Bear Harbor to Pat Kenny - Redwoods begin about 2 mi. up & cover the ridges, big ones also Jan Oak & Madrona.



## Pat Kenny's

- Bear Harbor Lumber Co pays 21 cents each for R.R. ties. The men in the woods are paid by the piece. The tanbark peelers get 45 to 55 dollars per mo. This from a woodsman. He says standing tanbark trees never die. Knows <sup>peeled</sup> trees peeled 14 or 15 years ago. <sup>living</sup> Burned trees may be peeled. May peel just as well as unburned. Sometimes they leave them.

A surprising number of tan oak bunks are fire hollowed at base on one side. The borer get in here and eventually they cut off the tree and it falls. The borers kill the standing peeled, my informant believes.

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they do not die unless something kills them. He says there is an <sup>under-bark</sup> which sticks and in this the sap runs.

I have just examined <sup>peeled</sup> at least one year - probably <sup>2</sup> years - the top did not seem much effected. Two cuts had been taken. The peeled stump on its lower part when scraped revealed a thin green layer of bark. This was not continuous up & down the peel - above I ran the axe all the way around without detecting a layer. Such trees often have thick-foliated top and are now going about the business of growing in an unconcerned way.



## Pat Kenny's to

- No. 2151. *Rhododendron* <sup>macrophyllum</sup> ~~macrophyllum~~ <sup>flavos</sup> clusters always from terminal buds. These buds sometimes winter-killed and persistent 1 or 2 years. Buds already formed for next year's flowers.
- No. 2152. Snow Bush. *Ceanothus velutinus* Dougl. var. *laevigatus* T. & G. (Colanderi Gray.)
- No. 2153. *Phacelia* Same as coll. in Aug? Seed package also taken.
- No. 2154. Raspberry in formation. Fruits; from bush with 5-foliate leaved canes. Fruit red when not ripe, dull purple or blackish when dead ripe. Leaf-spine taken. Notes: transition from simple terminal leaflet to form replaced by 3.
- = *Rubus leucodermis* Dougl.  
= *A. columbiana* Piper. Lindl.
- No. 2155. *Arctostaphylos tomentosa* Lindl.
- No. 2156. *Senecio* <sup>sylvaticus L.</sup> ~~vulgaris?~~ often with branches at very base, + 10 times as large

Utsel, Aug. 7, 1902.

- Saw Oak - 1st year shoots as much as 3 ft. high. Average growth of shoots, adult trees, about 9 in. First year growth from stump will average only 1 1/4 - 2 ft. high.
- Utsel is a quaint place; its row of 2-story dwellings on the S. side of the creek are picturesque in spite of their run-down character.
- The Gualala is loading bark at the mouth of the creek.
- No. 2157. *Lilium rubescens* Near Twats.
- Pat Kenny's
- No. 2158. *Ceanothus* (Snow Bush)
- No. 2159. Redwood shoots. *Sequoia sempervirens* Endl.



## Usal

Tan Oak.

- 17,000 - 20,000 cords shipped  
from here - total - last ten  
years

- 2300 in 1902

- 3100 in 1901

Card - 2550 pounds.

\$11.00 per cord,

- (M. A. Kilduff) Dealers in  
Sawbark and  
R.R. ties

Tan-oak not shipped from  
Humboldt Co to any extent - only  
a little within the last 5 years  
- "not more than 500 cords" -

M. A. Kilduff.

Sawbark must be not less than  
2 in. thick - less than that is  
paperbark and has no substance

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Usal Redwood Co. - owns the plant  
at Usal, "largest & best mill on  
the coast" - whole plant destroyed  
by fire 4 weeks ago. Railway  
into interior - steam dunnies  
for hauling cars.

- The Company cut the Tanbark  
on its lands before logging  
mill logs. Had to do this as the  
fire (which always follows  
logging) would have destroyed  
Tan oak.

- The stock holders in the Usal Co.  
are mostly Michigan people.

- The Co's property has been  
leased for the last year and half  
to

- R.R. ties, 6 ft long, x 6 x 8 in.



## Udal to Cottonaby Creek

- *Pinus contorta*, sharp line between this + the bush thicket (<sup>*Corylus cal. nos.*</sup> Hazel, Poison Oak, *Holodiscus*, *Thimble-berry* <sup>hill</sup> <sub>*Rubus parviflorus*</sub>) on south of Udal village, little ridges running down to Udal creek floor, bush thicket (towards ocean) stops in a sharp up & down line, *Pinus contorta* begins - as sharply defined as if planted.

*Pinus contorta* is found in little clusters in the hollows, gulches and on semi-protected hill slopes. Towards the sea they are usually cut off sharply in the line of wind. It looks as if it might be very common on the lee side of dense <sup>the wall of foliage on the</sup>

Aug. 7, 1902.

- Between Udal + Cottonaby is a beautiful road and the most beautiful redwoods I ever saw. The road is kept in fine condition by the fog-rain from the great Redwoods every night. The road runs along on a level (practically) along the bluff. We are in the edge of the Redwoods and the trees are more or less scattered or individualized. And such beauties as they were. So individual, not on account of the trees being broken, perfect trees yet not strikingly symmetrical. What beauties! What beauties! The bluff & the ocean.

- *Cantharus thyrsiformis*, pure colonies, acres of it here & there, 15-21 ft. high. Finest growth I ever saw. I should say it reached here the greatest development of the species.



## Bottomaty Creek to

- <sup>H72</sup>  
 - Bolander at one time botanized on this creek. I recognized the creek name at once when I heard it, as being on his old labels.  
 - Foxglove here - in fl.  
   Digitalis  
 - Once a landing store at this place decayed place as so many others. The name of the ranch where we stopped all night is the Devilbiss Ranch.  
 - Dutchman concerning rain: "This country is peculiar. It rains and rains and the creeks never get full. Well, they fill up a little but not much." - So much for the forest cover and the dense brush.  
 - Red Bilberry - berries scarlet. Scarlet!! Full ripe.

## Rockport, Aug. 8, 1902

- Steam railway here. Has a decayed appearance as if its busy redwood days were past. Perhaps 20 "houses" in the place. Store, post office & hotel.  
 - Rockport - lumber <sup>of Tan Oak</sup> shipped for 20 year. J. S. Kimball is a dealer - "Shipped for 20 or 30 years. <sup>Devilbiss</sup> none shipped now. Country about cleared out of lumber. 30,000 cords total at outside. Some years 2000 or 3000 cords. Other years none." - Postmaster.  
 - Barbuberry. fruiting racemes 10 in. long (Barbavis nervosa). Plants 2 ft. high. Caudex 12-18 in. high.  
 - No. 2159. Barbavis nervosa, fruit in formaline black but glaucous.  
 - No. 2160. Salal berries, in form.



## Hardy Creek, to

- Waxberry - 30 ft. h - fruit on old wood. *Myrica californica*.

- Hardy Creek, shipping tan-bark  
- also great quantities of ties;  
mill here, owned by Cooper.  
Steam railway here.

- Juan Creek, landing here  
also. Tanbark shipped last year  
- a little - "damn little this year"  
- shipped by McFall. Sometime  
called Alviso Creek. Juan  
Alviso, Spaniard, lived there

Westport, Aug. 8, 1902.

- T. L. Young (Westport, Calif.)\*  
School-teacher at De Haven. Says

Aug. & Sept. foggy months. Waters

\* P.O. Address.

3 or 4 or 5 miles away in straight line  
His school in session. <sup>at De Haven</sup> We camped for  
lunch in vacant lot between school &  
store. He came to camp to visit & seeing  
my plants queried what I was doing. He  
then wanted to know ~~the~~ name of the  
common *Plantago lanceolata*. He said he  
had looked for it in the botanics. I showed  
him the species in the flora of W. Mid.  
Calif. & after looking at the book a bit he said:  
You are the author of this book? I said, yes.  
But how did he know?

- Westport: 3000 cords tanbark to be  
shipped this year, 1700 gone already.  
Kubikman & Lachs handling the bark &  
doing their own hauling; brought in  
14 mi. Takes 2 days to make round trip  
could make it in 1 1/2 days but don't  
not buying bark this year; price too low.  
About 700 or 800 cords a year bought for  
many years.

- Periwinkle in the wild hedge  
- ~~in the~~ <sup>the</sup> ~~bees~~.



## Kibesillah, Ten mile River,

- Below Westport the bluffs recede from the ocean and there is considerable level land, the strip about  $\frac{1}{2}$  mile <sup>semi</sup> wide, then it widens <sup>still more - see below</sup>.
- *Hypochaeris radicata* - taking the ranges, its habit too much for the native plants. Its <sup>reserves</sup> spread out flat and preempt positively a certain amount of territory.
- From Englenook to Blume the flat area is 1 to 2 mi. broad but 1 mile of it is a great expanse of sand dunes which is shifting inland all the while. Great long dunes 30-40-50 ft high are creeping inland, sticking thick tongues into the <sup>very</sup> banyards - & the ranches.
- *Pinus muricata* grove, 70 ft h -
- No *baluzin* Englenook + Ft. Bragg -
- No 2161 *Pinus muricata* all in one place

## Little Valley, Aug. 8, 1902

- "Frost White" here at Ft. Bragg; go up to Usal & Juan Creek - well the minute you cross Ten Mile River it is ~~not~~ warm! Why it isn't the same climate!"
  - Little Valley: Bishop Pine occurring in great forests; good fire wood; back from coast the tree is <sup>called</sup> cut for lumber, it makes a hard timber.
  - wax-berry, thrifty low round bushes - abundant in this region on moist levels. = *Myrica californica*.
- 
- Had no chance to <sup>enter</sup> ~~enter~~ sand-dune country but noted the *Abrochia*, etc. See Rev. p.
- Camped for the night just beyond Blume, at the ranch of William Dixon, who thinks campers are to be avoided, doesn't want <sup>them</sup> around, but he asked us to call again! When!



# Bleone, Pudding Creek, Fort

No. 2162. *Halenium* <sup>Bolanderi Gray.</sup> Rays about

22; in the boggy country of  
marshes, Waxberry + Bishop  
Pine. — Bleone

No. 2163. Composite, Rays about 21.

— Fargolova near Ft. Bragg. <sup>Ft. Bragg</sup>

— *Stachys Chamissonis*, its  
spike rising above through  
the tops of myrtle (waxberry)  
bushes — 7 ft tall!

— Bishop Pine is the prominent tree  
between Inglewood, Ft. Bragg & Mendocino  
City. Junc here, there, open spaces around  
them but large groves & dense growth, 50  
to 60 ft. h. The trees are exceedingly interesting  
in aspect, often picturesque and give charact-  
er to the country. They are  
Bishop Pine on cliffs, <sup>to the country.</sup> readily distinguishable  
on the very fine point <sup>as a species</sup> of the ocean.  
grove of Bishop Pine. *Pinus*  
contorta (35 ft. h.) + Lowland Fir  
mixed near Caspar.

# Bragg, Noyo, Caspar, Mendocino City, Aug

- Road between Ft. Bragg & Mendocino City?  
interesting drive along ocean bluffs with  
groves of Bishop Pine + *Pinus contorta*
- Ft. Bragg. Union Mill & R.R.
- Caspar has mill + railroad
- Tan Oak at Noyo.

- Fort Bragg - total 3000 cords to S.F.  
by Union Lumber Co. — ship  
very little.

- Albion Lumber Co., Mr. Standish,  
ships some tanbark.

- Mr. Plummer of the Union Lumber  
Co at Fort Bragg says very little  
tanbark shipped from points between  
here & Mendocino City except at  
Albion.

- We cut [Lowland Fir] 6 ft in  
diameter — makes fine lumber.

- Mr. <sup>W.P.</sup> Plummer, Union Lumber Co.

- Mr. Plummer says there are two rare  
Tan Oak distinguishable by color of bla



## Mendocino City to Gualaca, Aug. 9.

- *Ceanothus thyrsiflorus*, 3 ft. in circ. at 3 in. from ground, 2 ft. at 15 in. (above a limb) - 20 ft. h.  
 No. 2164. *Castanopsis* - 11 ft. h. bushy. *Pine Barrens*  
 No. 2165 *Cypripedium* - *Pine Barrens*  
 - *Mendocino Pine Barrens*: *Pinus contorta* (fruiting when only 1 1/2 ft. h.) grows to 6 or 20 ft. h. but on the typical barrens mostly 5-10 ft. h. the trees looking remarkably like the *Tamarix* of the High Sierras; *Cypripedium* (fruiting when only 1 ft. h.) growing to 6 or 10 or 15 ft. h. and forming dense growths like wheat only 2 to 4 ft. thick; Bishop Pine, up to 20 or 25 ft. h. but mostly 10 or 12 ft. h. in typical barrens. At

Melburne, Aug. 10, 1902

first plenty of Max-Berry, on this journey  
 No. 2166. *Pinus contorta* of Pine Barrens.  
 No. 2166 A. *Pinus minimilata* inner edge -  
 - Growth of tan oak from cut stump is slow. There are many shoots for one thing and the growth of oaks is slow in any case usually. The growth here is 2 to 8 in. this year and will average that in past years. Most all other oaks are slow in making regrowth. Black oak sometimes makes a considerable height in one year. Maul oak, I think, is rather slow and so *Q. virgiliana*. I must investigate these cases further.

- No. 2167. *Nutmeg Tree*. 40 ft. h. *Mell*  
 No. 2168. *Adiantum punctatum* DC.  
 No. 2169. *Adiantum punctatum* DC.  
 No. 2164. *Liliopsis* *Comptel*  
*Smilacina* *virginica*



Comptche to

No. 2170. *Ceanothus thyrsiflorus* Each  
Comptche to Low Gap.

- Dr. George J. Brown  
Mendocino City

President's Secretary Report to be  
sent him.

- We camped last night at  
Jonsalvas Ranch. Slept on the hay.  
So they wouldn't have a campfire  
about the place we got off early  
and camped beyond Melbourne at a  
neat little spot in the forest by  
a stream. Here we had a great  
comfortable breakfast. Packing  
up I discovered that I had left  
my field-book - This book - at  
Jonsalvas, having lost it in the  
tray. It was so dark when we  
left that I did not see it. So  
Mr. Goddard went on and I went  
back about 5 miles, recovered  
the book and was overtaken at

No. 2171 *Ceanothus* Comptche to Low Gap.  
No. 2172 *a foliosus* Comptche to Low Gap.

Mendocino Co.

Low Gap, Aug. 10, 1902.

Melbourne by Dr. Brown of Mendocino  
who gave us a ride. He is going  
to Ukiah and expect to come back  
with the Democratic nomination  
for Assemblyman in his pocket.  
He talked politics to us. At  
last I got him away from  
that and he ceased to pose (as  
I thought) was natural &  
very interesting in his  
recollections and so on.

- Heavy fog has prevailed since  
leaving Frenchis and before we  
overtook Mr. Goddard it came on  
to rain. We went on to Low  
Gap and camped for the  
night with the lumber beams.  
A mist-rain falling on us all night.  
We slept in the open without covering.  
There are two Redwood mills here.



## Comptche to

- "Yes. I make mauls out of an oak. Some people call it Pin Oak, others call it Spanish Oak. There is a third name for it. Well I can't remember it now. It grows about here. There is some 4 or 5 miles back. And there is some ahead. There are ~~some~~ trees ahead <sup>near the road</sup> but you wouldn't know <sup>them</sup> ~~it~~ if you saw it. I use the small trees. From the small trees I get a good maul, but in. through is the best, the wood does not batter but very little. It is hard to find a tree of this \*

## Low Gap. Aug. 10, 1902

right size. They are not so common. The wood is very hard and close-grained. It is about as heavy when it is dry as when it is wet. It weighs just about as much. It is a very heavy wood. The mill men on the coast use a great deal of it. They send a man swagmen ~~even~~ <sup>early</sup> even fall. It takes a good while to get it. They can't cut much in a day, the wood is so very hard. The mill men cut 4 mauls out of a section. They take big logs - the whole tree, but the old wood is ~~not~~ <sup>not</sup> so good as that of the \* of the coast. There is none there



## Comptche to

young tree. It batters more easily. I also make "bucks" of it for getting out railroad ties from Redwood logs. [Bucks = wedges, one end pointed flat way, the other end iron-bound.] Such wedges are better than iron wedges. I have an iron wedge but I don't use it. I don't like it. It sticks and doesn't drive easily. A Pin Oak wedge will slip right out." - From a man named Wright on the Gleason's Ranch, the first ranch (on the road) above Low Gap. There is an open shed at the side of the road used for a shop. I was walking

## Low Gap, Aug. 10, 1902

ahead of our team on the up grade, to lighten load, when I fell in with him in front of his place. I asked him a question or two and got him to talking. He knew what he knew - knew it from his own experience. He had what Mr. Goddard calls folk-knowledge. Plainly he was in absolute ignorance of such a thing as scientific knowledge. But he was just the sort of a man I like to chance on with!

- I thanked Dr. Brown heartily for his kindness (he also shared his lunch with me) but he laughed and said: Oh, I like to pick up a man that looks like a tramp!"



# Low Gap to

- Low Gap is on a low saddle between the Albion + Big River headwaters. We then climb to the summit of the divide between these streams and the Russian. The Redwoods run to the summit.
- *Alnus rhombifolia*, between Low Gap + Ukiah, 1 mile below Pine Ridge, 10 ft 6 in at 4 ft.
- The Redwoods have formed (with Tan Oak + Douglas Spruce + Madrona) a continuous forest since leaving the pine barrens near the coast. At the edge of the belt right at the summit I noticed for the first

# Ukiah, Aug 11, 1902.

- time Black Oak. It has been densely foggy and it may have escaped my attention hitherto but I think not. Going down grade the *Quercus* Oak came in, and in the foot hill region Blue Oak! Just at Summit this side was *Ceanothus cuneatus* + *Adiantum fasciculatum* - just outside the Redwood belt.
- The *Ceanothus* of the region make a good study. When a species occurs in a place it is all over the place. You see it - and then you see nothing else scarcely. There was



## Low Gap to

a great abundance of *C. foliosus* & *C. parryi*. Both specimens of both from a place where we lunched between Halfway House & Low Gap. Our *Ceanothus* are good zone plants. They have very distinct preferences. *C. cuneatus* is found in very dry places, dry exposed very hot hill slopes & ridges. Snow brush is found up where the snow is on high ridge & mountain tops. *C. integerrimus* is found in good soils usually, at middle elevations or high. *C. prostratus* is of the

Ukiah, Aug. 11, 1902.

shade of the pines and so on. See nos. 2170-2172.

No. 2173. Maul oak - shoots from stump. Comptche to Low Gap.

No. 2174. Tan oak. Comptche to Low Gap.

- Mr. Barrett speaks of the Montgomery Redwoods near our Hot Springs as a fine grove, one tree measuring 66 ft in circ. nose-high. They are owned by a lady who camps there every summer. They are unlikely to be cut until her death.



## Ukiah

- Mr. Barrett tells me that there are two tan-bark extracts in S. Mendocino, one at <sup>Palo</sup> near Booneville, the other on the coast at Greenwood.
- Mr. Barrett speaks of 'Euc' of "white redwood" - the whole trees white - on Big River, 4 miles above Mendocino City. He has not seen them himself but he thinks his authority good.
- The *Hemizonias* and *Madias* - achenes - are used by the Ukiah Pomas for "pinole".

Aug. 12, 1902

[The day of the drive from Ft. Krazz to Mendocino City was a dreary foggy day - a poor one to get a good impression of the Bishop Pine (*Pinus muricata*) but still the beautiful groves of it will linger long in my memory. I did not stop & look long enough to "photograph" a good mental picture of the picturesque individuals that were so abundant, especially those on or near the ocean cliffs. This pine was firm mixed with *P. contorta* but the former is dark green with long needles, the latter light green with short needles.]



## Ukiah

"The waste of the wood - that is the only thing I don't like about the tanbark business" - Mr. Stitt.

[Miss Eastwood was at Ft. Bragg. All the time was precious I went to the house where she was stopping to say a word of greeting before going on. She came down very bright & smiling: "Hello, Japson" said she. How do you do Miss Eastwood. "What are you doing up here"? Oh, studying the forests a bit. "Have you seen all the trees? I have seen them all. Go up Pudding Creek. Well I haven't seen one - Lohmasey Paris. Did you find Quercus Sadleriana? Well, I haven't found that.

Aug. 12, 1902

Did you see Brewersiana? I haven't seen that <sup>Picea</sup> yet.

(I answered yes or no meanwhile) Then "Just starting out"?

No. I have been out since June 10.

"Gracious"

Good-bye

"Good-bye".

The gentlemen who told me that Miss Eastwood was in town was much impressed by her. Why, said he, she went 12 mi. to the top of a mountain to get a bit of a plant 4 in. high. Evidently he did not understand that she saw & got a lot of other things as well. Miss Eastwood evidently is natural and sincere but is undoubtedly "of the folk".



## Ukiah

[Union Lumber Co. offices 28 + 29, broker Bldg.]

- Lots of Missourians about Ukiah says Mr. Barrett. Smith, the Livermorean + sheriff, is one of them. I attempted to make a trade with him - our outfit came pale. He offered so little that I jolted him about it but <sup>he</sup> never smiled. Mr. Barrett says a Missourian can never see a joke. I have noted that fact myself.

Aug. 12, 1902.

- Westport, Usal & Bear Harbor, Rockport & Needle Rock, Shelden Cove - all <sup>tank bark has been</sup> taken <sup>int</sup> west of divide - west of S. Fork. Heavy invasions east of divide.
- One-half of S. Fork west slope.
- Brice land - greatest bark area
- Jackson Valley - practically all taken
- 500,000 acres of Redwood in Mendocino Co.
- Ten mile 100,000 acres "
- Navarero - <sup>good deal bark left not much taken</sup> bulk gone
- Big Run - " "
- One-half Bark in country gone
- Ukiah - 10 yrs - 200,000 cords
- " - 1901 - 4000 cords (thousands)
- now exhausted practically



## Ukiah

- F. A. McKee, French P.O. Kuro about seasoning Tan Oak & No usq. He lives in S.F. but his son lives at French's. Mr. Thomas says that he simply puts the logs into water and lets them soak [I suppose this method leeches the sap excess.] The logs are then cut up into lumber.
- Mr. Thomas thinks the extractions are not a success. The extractors
- in order to sell their products give it a high recommendation
- claim that they reduce 5 cords of bark into one or in any event 4 cords into one. Thomas does not believe that they get more than

Aug. 12, 1902

2 1/2 cords into one and do well to do that.

- The name of the Indian who divorced his wife was Gourd-house Pete because he was so commonly in the Reservation jail. After Pete divorced his wife, Bob said things about Pete. Interested friends went & told Pete. Pete said things about Bob. Third friends said them before Bob. So things became quite fierce. And the pacification hitherto recited followed.
- After Pete made friends with Bob, the Field Matron took cognizance of him, having heard that he was living



## Ukiah

with a woman. She spoke to the Agent and the Agent sent her down. No, said Pete, that's all right. But aren't you living with her and not married, insisted the Matron. Oh, no, says Pete, is going to marry her. Now, I am just getting acquainted, just trying her to see how I like her!

- Pat Kenny is the Kastmarla at Kenneyville. The Washington office returned his reports and ordered them made out properly. Pat sent them back with the remark to make them out for themselves; they had more time than he had.

Aug. 13, 1902.

- Dr. G. W. Stout, Ukiah, wants specific properties of *Erythraea muhlenbergii*. A patient of his has unbounded faith in it - for chills; say it will cure the worst case.

- Mr. S. A. Barrett, Ukiah

Expenses of the Trip

|                  |         |
|------------------|---------|
| Groceries        | \$28.15 |
| Wagon            | 58.00   |
| Harness          | 18.00   |
| Horses           | 100.00  |
|                  | 14.00   |
| Brake etc, shoes | 18.00   |
| Fares Ukiah met  | 56.55   |
| Road expenses    | 292.70  |
| Total            | 110.00  |
| Sale of outfit   | 1182.70 |
| One-half         |         |
| My expenses      | 91.35   |

I owe Mr. Goddard \$3.15. Paid.



## Berkeley

— "The Tan Oak usually lives 3 years. Peeling occurs before flowering. The first year the growth of the tree is so checked that the tree will or rather does not fruit. The second year the tree bears a big crop of acorns, it is the "last kick" of the tree as the woodsmen say; the third year the tree usually dies. A tree may live on a great number of years. My father noted the brown coat or varnish which often comes on the trees. This coat is very sticky the first fall. I do not know whether the long-lived trees are those peeled last

Aug. 15, 1902

season or no. The finest and largest tan-oak is found on the ridges. The shoots which come up from the stump are called scrub oak. It never amounts to anything. The finest and most vigorous trees are found towards the interior. These trees produce the finest bark for commercial purposes since the bark contains the greatest amount as percent of tannin. Sometimes the peelers attempt to take bark from the standing peeled trees but the bark feels badly, very badly, and the percent of tannin is so small that the bark isn't worth anything. It is



## Berkeley

really no good as tan bark. Some years tan bark will not feel.

Such years are very very cold years with sleet and cold northwesterly winds. In a warm season the bark feels very finely, the hotter the season the better. The peeling season begins about June 15 and stops about this time or earlier. The men are now sledding out the bark to the roadways.  
- Miss Hook

Tan Oak = see opp. page.

Result of very imperfect figures gathered from those willing to give information in summer 1902. The big lumber companies have probably shipped a total of 200,000 cords among themselves.

Aug. 15, 1902.

"The pink, white and yellow azaleas - all three grow in Mendocino Co." - Miss Hook  
↑ Charlotte

Mendocino County  
to 1902. See prev. page.

| Total tan bark shipped           |           | Cords   |
|----------------------------------|-----------|---------|
| Ukiah                            | -----     | 22,000  |
| Needle Rock                      |           | 21,000  |
| Bear Harbor                      |           | 20,000  |
| Usal                             |           | 20,000  |
| Rockport                         |           | 30,000  |
| Hardy Creek                      |           | 500     |
| Juan Creek                       |           | 500     |
| Westport                         |           | 11,000  |
| Union Lumber Co (rough estimate) |           | 15,000  |
| Minimum Rough Estimate {         | albin     | 10,000  |
|                                  | Mendocino | 30,000  |
|                                  | Greenwood | 10,000  |
|                                  | Willits   | 10,000  |
|                                  | Total     | 200,000 |



## Berkeley

- *Trillium sessile* is called  
"Rock Lily" by children at  
Mendocino City, also  
Redwood Lily and Easter Lily.  
The white *Trillium sessile*  
- Miss Hook.

*T. natum*, white, fades reddish.

Aug. 15, 1902.

My dear sister:

Yes indeed: - For sixty  
- three happy days I have been  
living in north western California  
a most glorious hor.-fast with the  
trees. Not elsewhere is there such a  
fine assemblage of species as may  
be found on the Eel and Trinity  
Rivers, on Mad River, on the Mattole  
and on the Salmon. So I have  
been literally living with them,  
in hot burning noon-shine  
and at night in all the fluctuation  
of weather - with nothing in the  
world to hinder.

Now I am again in Berkeley, living  
beneath the roofs made by men with all  
the "infatuations of civilization" - and in 2 days  
I acquire a most elegant cold - no tree-trailer  
ever had a better one. Your Loving Brother  
Willis.



## St. Helena

- Douglas Oak & Black Oak acorns falling! Valley Oak not yet ripe.
- Looking toward Hurd Mt from the west side one distinguishes 3 zones; the ~~Douglas~~ Spruce covered low hills, the chaparral and chamiseal (red-brown) and then the yellow pine on the very top.
- Westward the low zone is below and is composed of Madroño, Black Oak, & Maple. At this time the first two are dark green and the hills are thin dappled with the yellow of the ~~Maple~~.

Sept. 28, 1902

a beautiful and satisfying fall scene.

- Black Oak acorn crop good.
- Valley Oak acorn crop slim
- 

---

Berkeley, Oct. 8, 1902

- Hell's Ten Acre Spot in Jerusalem Canon, below Table Mountain, about 7 m. S.N.E. of Middletown.
-



## Gwin Mine

- The foothills are now most desolate at this time. There has been no rain and the long dry season's sun has "spread its sackcloth" over the hills and strewn its ashes in the valley. The trip up was tiresome and fearfully dusty. The chamiso came in, in a rather distinct but not dense zone at valley and it was not so long before Digger Pine was noted. The zones here do not seem to be very sharp as the test species run down very low. (Calaveras Co.)

October 1, 1902.

- Digger Pine 4-ft cordwood sells for \$5.00 delivered at the mine. It is used in the furnaces for steam heat. "It is harder than Yellow Pine and more pitchy" according to the teamster who brought in a load.
- Red Spruce, for timbering shaft, lasts a long time "under water"
- Red Fir - red heartwood white sap.
- Oregon<sup>Pine</sup> - 24000 ft. goes down into the mine every month
- Ditch which supplies mine with water about 75 mi. long. Loss of water by evaporation very great during summer. 100 inches loss



## Gwin Mine.

per day (on Sept. 1, 1902). This is a miner's inch = 17,250 gals. The mine takes about 250 or 300 in. per day.

- Mr. Thomas says that people in Death Valley have died with water canteens in their canteens! This was because they did not drink water fast enough to provide for the exceedingly rapid evaporation!

- *Quercus Douglasii* shoots - 3 ft. long in one season and branching! No normal growth of one season branches. These shoots from a cut stump.

- Fasciated *Dicentra chrysantha*. See <sup>my</sup> spec. in U.S. Herb. congestion & multiplication of branchlets but no flattening of axis.

Oct. 6, 1902.

No. 2174a. *Navarretia filicaulis* Greene.

No. 2175. *Quercus Douglasii* H + A

No. 2176. *Stephanomeria virgata*.  
Why not "Shale-lettuce" for a common name?

No. 2177. *Streptanthus suffrutescens*  
Rocky cliffs at Inspiration Point, overlooking Mokelumne River near Gwin Mine. Plants in fruit, the pods opening; the plants nearly or quite dead. Spring seedlings with green leaves.

- *Quercus Douglasii*, long heat of the protracted dry season, many young trees with the leaves all dead & brown and ready to fall at a touch (as if fire killed) - but the trees not injured otherwise apparently.



## Stockton

- Mr. J. A. Sanford says *Centaurea Melitensis* was first observed by him on the Stanislaus River sixteen years ago. It has since become abundant in this region near Stockton and now covers hundreds of acres in the fields, especially where it has been brought down by water of the streams and has seeded the low or over-flooded lands.
- Mr. Sanford finds 2 sorts of wild lettuce hereabouts.
- Stockton has an Arbor Day Committee. "They" expect to plant a great many trees in the next two years.

Oct. 9, 1902.

- *Phytolacca decandra*, in streets of Linden, escaped or waif, acc. to J. A. Sanford.
- *Echinodorus*, near Stockton, Sanford.
- Stockton has fine street-trees as compared with other Californian towns. In the park or square on N. El Dorado are the finest Texas Umbrella trees which I ever saw. They have rather tall trunks and the branches have been thrown high. The crown is nevertheless broad and spreading.
- The effect being very fine, indeed almost tropical.
- *Sagittaria Sanfordi* covers a hundred acres near the San Joaquin Bridge - J. A. S.



Berkeley, Oct. 16, 1902

- Mr. Perreles, F.L.S. of London, England, has just been into look over my collection of *Rhamnus* collected this summer. He says that at Mendocino City in the direction of the Big River bridge there is a patch of *Rhamnus californica* & *Purshiana* with every possible gradation. The broad-leaved form of the Redwoods as at Campche he refers to *californica*. What is the test between the two? Well *californica* is evergreen & *Purshiana* is deciduous. *californica* fruit splits into 2 parts - it has 3 parts sometimes but the number of times in a hundred are few. *Purshiana* has a 3-parted fruit or a

Berkeley, Oct. 16, 1902.

2-parted fruit. I notice that true *Purshiana* has a tendency to have a tuft of leaves at the ends of the branchlets and not scattered along as in *californica*. He regards *tomentosa* as the most erratic in leaf shape.

---

Mr. F. L. Bohlender,  
Foreman Chico For. St.  
Chico.

50 - 250 lbs. Tan Oak acorns.

- 
1. Tan Oak seedlings
  2. Tan Oak crops?
  3. Enemies of the acorns, hogs, etc.?
  4. What trees come up when redwoods are cut off?

5



Berkeley, Oct. 28, 1902.

- Miss Hoak says Tan Oak and pine (*Pinus muricata*?) will come up in cut-over redwood land.
- Miss H. says that the Comptel neighborhood has a specialist on the color of the redwoods that she finds that there is a distinct color for every day in the year.

From Cloverdale one runs out of the sunwarmed peaceful Coast Range valley of farming lands + orchards, where cocks crow into the still opulent air and a man is picking grapes in the hillside vineyard, where there are a thousand little oak-shaded vales where a wary man plays at living in Arcady and with

Cloverdale to Yorkville, Nov. 1, 1902.

- "Peons of Tan Oak come mostly in top of tree. Tan Oak poles after 2 runs taken die soon if they stand in the sun; if in the shade they live several years but die at last. In the sun the thin bark which forms is killed, the young bark in the shade lives. Tanbark at Cloverdale sold for \$13.00 per cord; now <sup>this season</sup> it sells for only \$12.00. A cord is 2300 lbs dry bark; in the season of cutting + hauling a cord is 2400 lbs. The tanbark is mostly gone in this region - about Yorkville" From the Stage-driver, who is a first-rate observer apparently.



## Yorkville

- Landlord of Yorkville Hotel says Tan Oak acorns germinate freely but that the cattle browse off the tender shoot and kill the young seedling. The country just ~~inside~~ outside the Redwood country is Tan Oak country and the Tan Oak country is of the "bald hill" country. All this region is cattle country and cows & pigs run unrestrained over the whole area from Bonoma to the Klamath. *Quercus garryana* grows in this region. In the High Lake Co region north to the Yalco Valley Mr. Mackie found that *Garryana*

Nov. 1, 1902.

exceedingly valuable as a browsing plant. The Stage-driver from Yorkville to Philo thinks that few acorns of the Tan Oak have a chance to germinate as <sup>not many</sup> the pigs eat them but also are found of them. This <sup>the cattle</sup> is probably very largely true. The Tan oak acorns are now falling and at this place one cannot find a good acorn on the ground - they are immediately eaten by the hogs who have only to thrust forward a nose, which <sup>is</sup> at the least delicately sensible in smell, to detect the good acorns from the wormy ones. In many cases I could not determine the difference without using my knife.



## Yorkville

- Stage-driven Yorkville to Philo says: "Fam Oak poles girdled may live indefinitely. I know positively of cases where trees have lived ten years the inner bark forming and becoming one-half inch thick. Such trees whether they live 1 or several years never amount to anything and the bark above (that left on the tree) can never afterwards be removed. It does not make any difference whether the tree is peeled early or late for the reason that trees standing side by side and peeled at the same time will

Nov. 1, 1902

be favored differently as to longevity, one tree will die the same fall (as they flunk) - and another tree will live on". - Mr. Hunt, Stage-driven.  
 - The Snow-berry (*Symphoricarpos racemosus*) is called "Buck-berry" in the Yorkville region, according to the Stage-driven from Clonadale to Yorkville. Same stage-driven says, <sup>again</sup> people near Clonadale sold their grapes for a price that was more than the land is worth that they are growing on. The usual price was \$25.00 to \$30.00 per ton. Yorkville has 3 or 4 houses. We arrived at 4:30, left at 7:30, reached Philo at 10:30 and Greenwood on the coast at 4:30 A.M. It was a long hard



## Yorkville to Philo

drive and inasmuch as I had  
 woken at 5:30 and did not get to  
 bed for half-an-hour that  
 made twenty-four hours  
 continuous going. There was  
 just one compensation to that  
 long weary ride over mountainous  
 country - the Madras! Ah  
 Robin Hood tree, Robin Hood tree  
 half-elfin, half-human,  
 "airy and true", reveling in  
 delightful surprises, whimsical, tender  
 joys, color-glad when shall  
 all thy charms be known?  
 Out into the black night we  
 rode, over the mountains, the  
 shadowy outlines of the trees  
 impressing in the darkness.  
 At the sides of the mail-wagon

Nov. 1, 1902.

two reflector lanterns. Suddenly  
 out of the <sup>black</sup> darkness ahead sprang  
 a great tree clothed from top  
 to bottom in radiant light. It  
 was splendid in a light that  
 carried to childhood dreams  
 and other worlds. What was  
 this tree personified in light, ~~from~~  
 this & every leaf bright shining  
 not a light that scintillated or  
 sparkled (that would have  
 spoiled and made it seem  
 like man's) but a light so  
 bright, so white-bright that  
 it looked like nothing that  
 ever was. It was the Madras  
 tree. The low light of our lantern  
 caught the white bloom on  
 the under surface of the leaves



## Boonville to Philo

and even a long distance ahead, where the light did not reach, <sup>apparently</sup> a Madrona tree would suddenly spring into being from the dense black mass of other trees, which revealed themselves. This gave the hard journey a delight that soothed and relieved the hardships. Our lanterns seemed to be lighted by the Madronas - their flame first glowing and then the whole tree lighting. The lanterns did not throw much light into the blackness - but when the Madrona light seemed to reach so short a distance - but when the Madronas caught the light the closing in darkness was the further back, all surrounding

Nov. 1, 1902

things stood aside, we seemed to have elbow <sup>wide</sup> room. "for the Madronas cried: 'we are here', the cry was just as plain as that soon if they made no sound! Ah but then at long coming into time - own!" At Boonville we waited for the way-mail bags to be sent. Boonville is in Anderson Valley, the lower end of it, - and is quite a settlement. At Philo we changed stages. The night was getting cold, the bitter cold of the Lamp coast. A cloud of smoke from the steaming horses rose in the air. At 10.30 as thereabouts we went on - the stage-driven slept: in 1 to 5-min. naps all night - as I did. I roused



# Philo to Greenwood,

myself on one occasion and found that the lines had fallen to the pole and were dragging. The horses knew well, however, how to keep to the road. After that the stage-driver shook himself and sent the horses along on a run until he ~~of~~ turned them into the electric-lighted street of Greenwood at about 4:30 or 5:00 o'clock, and then I went to bed and slept until 11:00.

- W. Fairbanks, photographer, Greenwood, has some fine enlargements.

- The coast at Greenwood is similar to Needle Rock, etc., town on the bluffs 150 to 200 ft. above ocean, the bare hills rising sheer from ocean

Nov. 2, 1902.

and few trees to be seen from seaward. The Bishop Pine is on the very ocean bluffs, the thick tops very intricately branched, the branches often so crowded with cones that the wood cannot be seen, the cones opening after 6 or 7 years.

- *Ceanothus thyrsiflorus* on the ocean bluffs, 10 ft. h. - greenish trunks.

- The Redwoods and the Big Trees give you what you give them. A college youth, irreverent boy whose my thought of tree trunks was something which terrified him to shivering, turned to me on first sight of the Big Trees:



## Greenwood

Jolly, Doctor, what a time a fellow would have trying to skin up one of those. So with other folk: The mystic approaches these creations with the tears running down his face and sees in them expressions of a subtle or mysterious power; the Artist sees colors and effects that are but dimly felt by the non-cultivated eye; the imaginative person is impressed by the size of these bees and the ages which it took to build them and so his mind goes back to the conditions of

Nov. 2, 1902.

their Babyhood when the glaciers pitched their tents outside the walls of Troy. — The of which has been written in the barroom of the Hotel Greenwood, millmen, woodsmen, teamsters — all getting jolly full in preparation for the <sup>state</sup> elections next Tuesday. One old millman, over half-a-century and very jolly, came up to me and said:  
Taking stock of us?

- The extractor here is owned by Merriam Bros. They ship much of their distilled product in barrels to Japan. It goes first to San Francisco.



## Greenwood

The "Company" here is the L. E. White Lumber Company. The manager of the Company store is Mr. ~~Con~~ <sup>White</sup> Scott, Greenwood, P.O.

- Mr. E. Simmons has peeled 2-d growth Saw Oak.
- H. A. Merriam, 218 Calif. St. St. California Lumber Extract Co.
- Merriam Bros extractors at Greenwood. Bark ground in a mill and carried by a conveyor and dropped into tanks or vats of 8000 gals capacity to be leached. These conveyors pass over the center of the tanks and drop the ground bark at two points over a tank so that the bark will

Nov. 3, 1902.

not accumulate in one place. These tanks are heated by steam pipes in the bottom of the vats which give off jets of steam which pass up through the liquid. There are 7 vats. The process is at different stages in the various tanks. The liquid is pumped off through a pipe by a centrifugal pump and carried up to a receiving tank. From here the liquid passes over three evaporating pans. The upper pan is slightly inclined. The liquid runs gradually to the end and drops upon a second pan which is inclined in



## Greenwood

the opposite direction. Lastly there is a third pan below which received the liquid and is again inclined. Then the liquid goes back into a second vat and passes and re-passes over the pans until it has arrived at the consistency of molasses. The liquid is then very dark and has a ~~dark~~ reddish glint to it. Then it goes to the lower floor to a storage tank whence it is barreled. The barrels weigh net 510 to 560 lbs. I noted a few - and each barrel holds about 80 gallons. A cord of bark is reduced to one

Nov. 3, 1902.

barrel. The tanner's strike in San Francisco has caused the tying up of the mill here - there being no present demand for the extract, there are too many barrels full which cannot be released, and barrels are scarce.

The pans are heated by coils of steam pipes beneath and are kept in motion. This exposes as much surface as possible to the air. The steam is immediately taken off by a blower on one side of the condensing apparatus. The spent bark is taken directly out



## Greenwood

of the tanks through the bottom and is carried by a conveyor to the boiler house where it is fed to the furnaces, so that even the refuse is utilized. On its way out it is fed through rollers, a sort of clothes-wringer-like affair, and the water taken out.

This form sometimes slips bark in the ground state. It can be shipped abroad in that way, as the ocean slips would not take loose bark.

- *Bonium maculatum*, fl. fr.

Nov. 3, 1902.

- Mr. Green, a tanbark peeler, says: Tan Oak saplings will often live after having two runs taken off, a scum forming beneath on the wood and growing into a bark. I have peeled such a tree the second time - the bark was 1 in. thick [Mr. Green was positive about this statement.] It depends whether the bark sticks a bit or not as to whether the tree lives. At the beginning of the season the bark sticks and at the end of the season "when the sap goes down" the bark sticks a little at first.



## Greenwood

and then finally so much that the peelers must stop work. A good tanbark claim (160 a) has on it 300 to 600 ~~acres~~ cords of bark. The country cut over averages 300 to 500 cords per quarter section. I know of claims that yielded 1000 cords but these were altogether exceptional claims. [An old timer here asserted that he had cut 1284 cords from a claim but this was the record!] [Bark is hauled out 18 mi. This is not a bark country really. The Upper Mattale is a great bark country

Nov. 3, 1902

and 40 miles up the country of the Klamath - The Old Timer) Mr. Green said he had known a case in which 30 out of 100 trees held their scum and lived. The Old Timer took violent issue with him and ~~was~~ positive that not more than 1 tree out of a thousand lived, and these never amounted to anything, the scum never grew thick. You could never feel that a second time! These trees existed, just existed, that was all.

[Brice land - 3500 cords <sup>tanbark</sup> stored this year by Wagner Co.]



## Elk Creek

- Elk Creek Chopper's Camp, stump <sup>Red</sup> with 709 rings. From the 250 to 350 ring the rings were rather large, otherwise very small, so fine as scarcely to be counted.

The radius = 27 inches.

- Redwood sheds 2-4 yr-old wings

- Yew - sprawling branching <sup>Taxus brevifolia</sup>

- This grandis - tree 150 ft. h.

- Tan Oak bush is exceedingly plentiful, 1 to 5 or 8 ft high, but in forest shade especially 2 ft. h. or thereabouts. Sometimes one sees seedling-like things but scrutinized they show to be 2 yr old anyway. They

Nov. 5, 1902

seem to come, usually, from an underground stock as if they had been browsed or more probably fired off in burning and had come up again "from the root"

I think the smallest are dwarfs from old roots. In only a few cases did I discover a truly seedling-like root 2 or 3 yrs old was doubtful about this.

- The company is peeling the tan oak here in advance of logging. They are shedding much of it in the woods where it will stay until the railroad reaches it. I suppose



## Elk Creek

I saw 100 cords (shedded) this morning.

The Lowland Fir is not esteemed for lumber. They cut it but use it mainly for their own temporary bunkhouses, sheds etc. It is said to make fine shelving for stores as the odor of the wood drives insects away from clothing.

Big trees are falling around me - first the sound of parting fibres growing more intense, a high whistle in the air, and a great crash increasing in resonance.

Nov. 5, 1902.

- Douglas Spruce - wood red (sap <sup>the resin</sup> white) coarse-grained, <sup>running</sup> (from the cut end) mainly from the sap wood.

- Redwood has white sap - a wood-chopper cabin made of split boards, half white and or margined with white, presented a very curious appearance.

- Saw Oak in the redwoods - there was the largest very splendid - none over 1 ft diam. here or scarcely more.

- About 100 men piled into the cook house & ate their dinner in about ten minutes. The type of faces was mostly animal - exceedingly listless or stolid; they walked heavily like cows. The food was



## Elk Creek

in abundance and the materials were good - but of course roughly served. They had fresh meat, fresh potatoes, good light bread, cabbage, soup, beans, good butter, first-rate apple pie. [For breakfast this am. I had rolls and an elegant steak. The <sup>new</sup> chef was a Chinaman with four assistants, his own countrymen.

[Came out on the Elk Creek Railroad Logging Train. We rode on the trucks - there being no flat-car for passengers. We were jerked now forward, now backward, as the engine pulled a hill or struck an incline

Nov. 5, 1902.

Achoring, the log-train was sent off on a grainy trip but after a mile the train "stuck" on curve, altho the grade was decidedly down hill. Finally an engine came along behind & pushed <sup>us</sup> down the cañon. - *Tsuga heterophylla* - trees near bottom of cañon - 100 ft. h., smoothish from trunk, slender branches slightly curved with the weight of the drooping branchlets of foliage. Branches spreading very slightly ascending. Top or crown thin, not thick.



# Elk Creek

- Take it all in all I think it justifiable to use the revolute edge of leaf of *Pinus Oregona* as a diagnostic mark <sup>in a key</sup> as against *rhombifolia*. It is very pronounced here at Greenwood as it always is in typical full-grown leaves.
- Redwood is the lightest of leafiform coniferous woods and yet when water-soaked it will sink if the log is a butt cut or even the second or third cut sec. to a woodsman here.
- Umbellulana - its variability
- Here on the steepest hillside fronting the ocean it forms

Nov. 5, 1902.

- low green mats, 1 or 2 ft. h., 10 or 15 ft. diam. & surfaced as smooth (by the wind) as a well-kept clover lawn.
- San Oak on the ~~ocean~~ terrible plateaus near the ocean - 500 yds.
- *Abies grandis* - young trees - leaders with 18 in. shoots of this season
- old trees 100 ft. h. & 2 ft. diam.
- <sup>(M.)</sup> Ellis Castner, Greenwood, Calif.  
This man is the "conductor" of the logging train. On the return trip the train took up a lively gait on the down grade and round the sharp curves that made one feel mighty uneasy for one had no seat except on top of the logs. Well, at one point the



## Elk Creek

train struck a gait that was a little too much even for the hardened brakeman Eastner and I saw him lurching along the logs and dropping down between cars whenever a brake was not covered by the logs and braking up hard. Well, he scrambled ~~over~~ <sup>along</sup> the logs on all fours as he came to the set of trucks on which I was riding and confessed that she was going "a little too fast for him". I did not know how narrow escape we had had from a runaway until the brakeman said afterwards that she came very nearly getting away

Nov. 5, 1902

from him. The logs rocked on the trucks like broom-sticks and as they were not lashed down there was nothing to prevent them being flung off. If one should go off one of the many little (100 to 500 ft. h.) it would have quite a fall. If it goes anywhere it must make quite a <sup>noise</sup> smash. So one must feel that he is in particularly good luck if the particular log that he is riding on is not the one that goes. All along the track one sees logs, scattered over the 15 miles of way, that have been flung off



## Elk Creek to

centrifugally. Well it will be a long time before I ride again on the train of the ~~Elk River~~ <sup>Creek</sup> Railroad.

- The Extractor Mill runs through 8-10 cord per day, 250-300 cord per month. A single vat of the liquor is run through the evaporator and finished by itself before another vat is touched. The liquor is kept <sup>hot</sup> from the beginning until it is finished. If it gets cold it will not run through the pipes and pans. A vat full is carried to the receiving tank in the

Greenwood, Nov. 6, 1902

evaporator room and then passes on to the evaporating pans. Then it runs off and is pumped by a centrifugal pump ~~back~~ to a "second tank" and over the pans again and back to the "second tank" and so on indefinitely until it has reached a sufficiently consistent state. All of the pans and pipes are copper as tannic acid would attack iron. Some of the conveying pipes are ~~of~~ made of redwood, however.

The "California Oak Extract Co." have a preparation on the market which is offered as a remedy for collar



## Greenwood

galls on horses, sores, etc

- Bishop Pine (*Pinus muricata*) on cliffs, at or near top of cliffs which descend vertically to waters of ocean! I have observed no contorta here.
- *Petasites palmata*, common in the deep-cut gulches
- *Baccharis pilularis*, in fr.

Nov. 6, 1902.

- The street of Greenwood has about 12 saloons. This is a good many when there with a couple of stores & the mill constitute at first glance the whole village. The Swedes appear to be a very sober lot. I admired immensely the fine color in the cheeks of so many of them. The Italians (or Austrians) were a most animal looking lot but the types around the saloons were mainly Irish and American, and the American before the Irish in persistent drunkenness.



Miller's, Manchester, Pt. Arena, Nov. 7, 1902.

Left Greenwood in stage of North Coast Stage Company, at 12:30. The country looked like Westport country, a narrow plateau facing the ocean waves, hills rising up sharply and mostly barren on the ocean face. Miller's is a hamlet and post office. The Bishop Pine occurs in a thin zone of scattered trees. To the south we could see stretching out into the ocean the long sandy spit of Pt. Arena. Manchester is a village in rolling hill country. By the time we near Pt. Arena the low country has broadened and

and we have here a farming & dairying region some five or six miles wide I should judge - over all this country is scattered about Bishop Pine with a dense grove here and there. These trees give a decided character to this country. They are the only trees and the stand, therefore, is pure. The Redwood Belt, has here, again, slipped back from the coast from Pt. Arena to Gualala the drive was made between 5:30 and 11:30, P.M. so that I made out little of the tree population, except the worn present Bishop Pine which seemed to be



## Gualala to Stewart's

increasing in numbers. In about five minutes I got to bed in the Gualala Hotel and was awakened at 1:30 the stage going on at 2:00 A.M. It was a miserably poky stage from here to Stewart's Pt.

The stage was a Concord coach and the two horses, one of which was lame, could barely pull it over the heavy hills. Here we had Redwoods - and then we passed through a forest of Bishop Pine, covering the low rounded hills, but never in swampy flats, all the way to Stewart's Point. So far as

Point, Nov. 8, 1902.

I was able to judge from going over the country in this way the heaviest and most extensive growth of Bishop Pine occurs in Sonoma Co between the mouth of the Gualala and Stewart's Point. At this latter place we had a hurried breakfast and got on to a good stage with four fine horses for a spanking ride to Cazadero over the high divide between the Gualala and the Russian River. The Redwood zone had some slender Fan Oak mixed with



## Sea View

it, wax berry bushes vigorous and clean and not looking like those in wet hillside hollows on the coast. — In and around Sea View the Redwoods are magnificent to the eye of the tree lover. In places the woods have been thinned out a little and the setting of the trees is exceedingly picturesque. Ever since leaving Stewart Point it has been raining and as we gained the top of the ridge at Sea View it came on to rain harder and harder. It was finally raining torrents when we changed horses at Sea View.

Nov. 8, 1902.

After a while the inside passengers began to growl about seeking water. And then sung out to them the stage-driver, a fine-looking fellow of 39, — "Why you fellows, there's a man here on top soaked in the rain for four hours and he hasn't said a word!" We waited for the way mail-bag at Sea View P.O. to be sorted and then went on at a gallop, down grade to a tributary of the Gualala, passing into the typical northern forest that bounds the inside of the Redwood Belt and composed of



## Cazadero to

Black Oak (fine specimens in deep rich soil of the ridges), Madrone, Iron Oak, Garryana Oak. The latter has very crooked or tortuous limbs on the old trees - more so than is the case in any Californian oak; it has more lichen moss on its branches; and more hanging lichen than any other, so that the trees have this distinction of habit which makes them very recognizable. In the open low land we strike some Buckeye and then we are climbing again for the top of a

## Valley Ford, Nov. 8, 1902.

ridge which throws water on the other side into the Russian and are passing through a forest of Redwood all the way to Cazadero. Cazadero has a hotel and is the terminus of the railroad.

That is about all. Here we took train. The country all about Valley Ford and all the way out to the coast and down to Tomales is barren hill country - not a tree anywhere. Is there a complete transverse break in the Redwood Belt at this point? I could see no Bishop Pines anywhere,



# Tonales to San

even near the ocean. All the country about Tonales and Valley Field is grazing or dairy country in the main I should say.

I am amazed at the number of foreigners in this north coast range region. They form whole villages along the track. Many Italians. Section-hands. And so through all the woods to Mendocino County.

Right up to the moment we arrived at Cazadero it continued to rain and I was pretty thoroughly wet in spite of the

Francisco, Nov. 8, 1902.

good warm overcoat which I wore. I staid over the hotel stove and when I reached the ferry boats backed myself up against the boilers and got as warm as was possible.

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- *Sauicula menziesii*, sent in by Archie O. Winters, Hydesville, who asks: "Is it poisonous to cattle? Some springs quite a number get poisoned and die". - See Letter File, June 16, 1903.



## Berkeley to Cloverdale &amp; Return, Nov. 12, 1902.

- As seen from the car windows there are some fine trees bordering a stream near Ignacio, Marin Co., especially Laurel. -

- To the west and southwest of Petaluma the hills appear barren quite. Does this barrenness extend to Valley Ford? If so the Redwood Belt is broken transversely & completely.

- At Cloverdale the valley level south of the town & so has on it Valley Oak, Field Oak, Laurel - standing apart. There is one Field Oak of erect habit and 65 ft. h.!

- *Alnus rhombifolia* at Cloverdale on the Russian River banks

- A little Redwood - a few trees, cross the Russian River at this point.

- Cottonwood, Fremontia, at Cloverdale! at Healdsburg - but only a little.

- In a field of the low-lying river lands, just across the Russian River bridge at Cloverdale, and about 400 yards from the bridge n.e. stands isolated (on a fence line) a fine Laurel, *Umbellularia Californica*. It measures:

14.7 in at 5 ft.

29 ft. at ground

93 ft. 6 in long diam. crown.



Bloomdale, Nov. 12, 1902

The flare of the trunk at the very base is considerable and sub-tabular, but the flare downwards is slight. That is to say the trunk is a symmetrical trunk with seated on a tabular base. The crown is broad and the ultimate branchlets drooping. It has the habit of a Valley Oak. The height is 70 or 75 ft.

No. 2178. Valley Oak acorns

No. 2179. Valley Oak acorns  
now germinating on ground.

No. 2180. Field Oak, some acorns  
still on tree.

Berkeley, Nov. 14, 1902

The best place to determine the enduring or resisting qualities of a tree, its characteristic situation, is at the outskirts of its range. The Redwood grows most deep canons in Napa Valley and in the Coast Ranges south of Monterey. But in the Eel country it covers both north and south slopes of the hills!

- Remember that the Big Tree increases in individuals southward

- the Redwood northward. The Big Tree does not sprout from the stump.

- Oaks in the Ojai died in 1900  
- valley Oaks - droughts.



Berkeley, Nov. 14, 1902.

My dear Mr. Branton: - The leaf outline of *Quercus wislizenii* is very erratic, but it is erratic, however, within certain well-defined limits. I refer now to the tree as it occurs in the main part of its range, namely the Sierra Foothills and the foothills of the Coast Ranges bounding the Sacramento Valley on the west. I may say that even from outlying stations the disqui-  
sitions of *Quercus wislizenii* have not been such as to give a great deal of trouble. In general I recognize *Quercus wislizenii* by its "leaf-

Berkeley, Nov. 14, 1902.

line" without the aid of acorns; in fact I have the feeling that I could do this always. Therefore I can say definitely that your #484 and 585 are not *Quercus wislizenii*. You will get acorns, will you not? If so it will be possible to come to a decision.

The most variable oak in all California is thought by some <sup>people</sup> to be *Quercus dumosa*. It is, indeed, very changeable. It fluctuates both in the leaves and acorns as scarcely believable. Have you a good line of this? We have a sheet of what we think *Q. dumosa*. Your specimens are comparable.



Berkeley, Nov. 14, 1902.

Meanwhile I trust you may find acorns.

Sincerely yours  
Arthur L. Jepson

Mr. Kelly - student - says: - Forest fire in Mariposa district last summer, took oaks as well as pines. The oaks went up with a roar - I was astonished. Trees did not burn up very much. Needles flew far & wide & carried fire. Pine cones rolled down hill & scattered fire badly. Digger Pine burns readily, very pitchy. Wood when dry hard to cut, very flinty. Called Blue Pine, Bull Pine, Squaw Pine.

Dec. 20, 1902.

- A few days ago there came in Dr. <sup>J.C.</sup> Willis, Director of the Royal Botanical Gardens at Peradeniya in Ceylon. He is an Englishman, of course, but has traveled extensively and is very cosmopolitan. He stopped an hour and a half and we didn't talk a word of Botany! He had very interesting talk about the peoples of the earth: he has noted the immigrations of the European nations - France's population has not increased at all in the last decade except by the considerable German immigration! There is also



## Berkeley

an English migration into France. We in America think of Europeans immigrating only to the colonies, to S. Am. or to the U.S. Willis doesn't think or at least is doubtful about the blending of the Latins and N. Europeans in U.S. They have never mixed in Europe. Willis says Indians approve of him - it is a true picture and is the best thing Kipling has done. Republicanism is out of the question in India, the office-holding caste would scorn office by election at the hands of a lower caste. Mills had brown eyes, brown hair, a straightish nose as if severely mended at the middle and a fluency in speech. He has a father in British-

Dec. 28, 1902.

The funniest things in America to Perredès was, as he said, these: - "you take up the collect with a fry-pan, you sweep your floors with a lawn-mower and you brush <sup>yourself</sup> with a broom"! Well, anyway, when Perredès got back to London he remembered me at Christmas with a delightful wish and a card containing a fine photo of the Jersey Cabbages from which walking sticks are made.

Columbia, and a brother in S. Calif. who was a farm-hand and worked for Hall's people.



## Berkeley Arbor Day Address:-

Mr President of the Day, Ladies and Gentlemen:- When I received the invitation to speak on Berkeley <sup>first</sup> Arbor Day I fell into a reminiscent mood and the Golden Age of childhood came back to me. Of all trees of my boyhood I loved best three:- The Gnarled Old Apple Tree, because it was our friendly resource for the wolf-like hunger of the boy in those long periods of famine between breakfast and dinner, between dinner and tea: The tall Cottonwood Tree, high landmark ~~above~~ <sup>over</sup> the swimming pool, every leaf dancing gaily in the long summer afternoons and signaling

Dec. 1902

the irresistible temptation: And then the Valley Oak, its massive trunk and branches supporting a huge crown which joined mysteriously on to the sky and was inhabited by jays, shrikes and carpenter birds - a noisy company, albeit a bit happier than we for they had no tasks and no school! And now I see again the fire-burned hollow in the trunk, hiding place of Indian foes, bears and wild animals of the imagination, often valiantly pursued and slain with wooden gun and wooden sword.



## Berkeley

But there are other trees not endeared by childhood recollections of bygone generations. Their very names have a sinister meaning. The buck, the hazel, the hickory, Oh Ye Ladies and Gentlemen of the Olden School, What a chastening influence had these! Well indeed for this Arbor Day that we have fallen on new times, <sup>do</sup> I fear there was no school leader here today to lend countenance to such a scheme as planting Confront trees in these our Berkeley school grounds.

Arbor Day, as the President of the Town Board, has told you is a comparatively modern

Dec. 1902

institution, but the spirit of Arbor Day is by no means modern. The man who hundreds of years ago planted for his children the tree that is a landmark in the country today observed Arbor Day in spirit if not in deed. Arbor Day has its foundations in the sentiments and associations connected with trees, and the practical results of Arbor Day are in other states more or less obvious. But the culture of trees in its influence on the minds of men is less generally regarded. He who plants seed looks forward to the harvest; he must plant and he must wait.



## Berkeley

This experience - from seed-time to harvest - cultivates the thoughtful disposition, the judgment and other solid furnishings of the mind. And that man who plants the seed of a tree, who guides the seedling through the precarious stages of its youth and beholds its development into a sturdy giant with the passing of the decades, knows that the lusty tree is not his only reward. His character has builded as well. For who will say that his long patience has not better fitted him to learn the hardest of life's tasks. - The hardest of life's tasks is

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to wait - and the power to wait is given to but few. In short all this experience in the culture of trees is in the end associated with ideas of permanence, of judgment and of power.

Love breeds many things. The inherent love of a tree is part of the nature of every refined man, but just what this love is I shall not attempt to tell you. My words as the falling leaf or rustle of the fall grass were too feeble. Listen to the words of the most beloved stranger that ever lived amongst us, he whose monument stands in Portsmouth Square, ~~San~~ in



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your city, the first monument to be erected to his memory in any part of the world, altho he was not our countryman. Listen here to the "Fable of the Distinguished Stranger" for I love to believe that these lines may have been written under the trees of California! -  
 [Then followed Stevenson's Fable.]

- Dr. Park has given me a picture of the Douglas Oak at Nelly Springs. It shows the groves and scattered trees on the low hills with the hot sunshine coming down into the open glades between.

Berkeley, January 27, '03

- Miss Hallie Bakewell says the large-flowered Baby Blue Eyes seed brought from Pacific Grove comes up ~~and~~ <sup>then</sup> in Oakland garden as small-flowered!
- Many are called but few get up.

Strawberry Cañon, Feb. 23

- Umbellularia in fl. - 4 distinct cells opening by lids which lift from below and eventually fall off altogether.
- Duck-Whistle follows the Can.

- It has always interested me that a scientific man like Darwin so frequently indulges in morals - true love-stories! - It seems contradictory but I can explain it in no other way, that an antidote is both pleasurable and profitable. A healthful innocent story is a resource; against the day's work it is rest, it is forgetfulness, it is wine and many other things.



Berkeley, Mar. 7, 1903

- Today came in Dikeman, ex-'89, who goes tomorrow to ~~the~~ Rhodesia as consulting engineer to an English Mining Co., \$10,000 per year and all expenses. D. has had a picturesque career. On Geol. Survey, let out, turned up in Silverton, Col., ten cents in his pocket, talked people into feeding him until he got a job, end of third day went to work shoveling snow on the trail, then rock into a rock-crusher, long hard day's work, then assayer, all for the same mining co. Later went to Idaho, passed through the Coeur d'Alene troubles and the bull-pen (on the outside town), back to Colorado where he was mining superintendent at the same mine; he found

Berkeley, Mar. 7, '03

two men doing the work of shoveling in ore that he had been hired to do formerly, and he as Supt. kept the two there! Supt. of the Red Boy in Oregon (Baker City); mine petered out, many miners discharged, these tried to run the Supt. out of town, threatened to shoot and to hang him; man with Winchester stayed at his door all night for protection, regularly; didn't run him out. ~~Went~~ of our boys began as assayers, - except me, I began shoveling snow! - and so work up. I have been through it all. Huntley, '75, is in S. Africa getting \$20,000 per yr.



Berkeley, Mar. 7, '03

- Davy left for S. Africa to take position as Govt Bot. of the Transvaal, last Sunday. Salary \$5,000 per year + traveling expenses. We are very sorry to lose him.

- I was at a dinner party at Mrs. Hugh McMichael's and sat next Mrs. Anson Blake who told this of Prof. Greene.

- Prof. Bradley: "What is this [fl]?"

I call it ——— [so & so]

- Prof. G. "You may call it so. I may call it anything you please."

This was very characteristic story of Greene. He may have chosen to act thus. At other times I am certain he did not know.

Berkeley, April 30, 1903

- The show-windows of S.H. Wood & Co, "gentle's clothes" on market at a little above the Chronicle Bldg is worth the attention of a botanist. The entire case (excepting of course the glass in front) is paneled in the sapwood of the Yellow Pine - the wood is very white (of course not white like holly) and is remarkably beautiful.

I do not know that I ever saw a more beautiful window finished in the natural wood.

All this ought to be encouraging to dealers in California woods.

Mr. Walter G. Kellogg called my attention to this window.

- Mrs. Walter G. Kellogg says: "I heard Dr. Japsen tell about his life in the Giant Forest, his



Berkeley, Apr. 1903.

Wonderful days and nights in the open air, + coming back to Berkeley and sleeping with all the windows wide open. Well I thought I'd try it - and the first night I nearly blew out the window! And a week afterward I debated if I should not send the doctor's bill to him!

- It is marvelous how much my words are regarded sometimes! - and how little others! I am and have surprised I am.

- Jennings says axle-grease would be great industry here but for the cooperage - no staves for building barrels. We can produce the grease cheaper than anywhere else - but the cooperage cost puts us out of the race with competitors, Eastern + elsewhere.

Berkeley, Apr. 18, 1903.

- Mr. Walter Kellogg says Incense Cedar has been little used on account of defective heart-wood. So few trees have sound hearts. - The California Don Co. has a mill on the American.

- Mr. Mackie says there are Nutmeg Trees 50-60 ft h. and a plenty on the road as near it from Patten to Corb. He says near the coast Nutmeg logs have been used for country bridges where everything else would rot - Redwood, Douglas Spruce, etc.

- Larson says he has an immense Coulter Pine from Mt. Hamilton. He called today leading a mangy dog by the string.



Berkeley, Apr. 18, 1903.

- *Salix lasiandra*, stipules absent (at this time) on both sterile and flowering shoots; leaves yellowish-green above, slightly pale beneath; - a tree on the Kellogg tract 18 years old was 13 inches in diameter at 1 ft. above ground; trunk-bark fissures into long narrow ridges which are ~~somewhat~~ braided.
- *Salix laevigata*, stipules conspicuous on sterile shoots, often inconspicuous or none on sterile shoots; leaves dark green above, pale as if glaucous beneath - Virginia street trees, Kellogg Tract.
- *Populus trichocarpa*, inside main North Coast Range (headwaters of Eel (Lake Mendocino) - but not on east side (foot hills east of Snow Mt.) - Mr. Mackie.

Niles and San Jose, Apr. 29.

- *Quercus agrifolia* crowns the hills above the station at San Jose Niles - a grove of the low (2 to 3 ft. R.) round-barked trees on top of the hill. They always show dark against all the shades of green or brown at all seasons of the year.
- *Sycamores* just beginning to leaf out.



San Jose, Apr. 29

- Went out to State Normal School to see their Herbarium which they propose to give to Univ. of Calif. It is in poor condition, some orders almost wholly destroyed by insects, other specimens without sufficient data, a great lot of stuff from New York, some things collected by Miss M.E. Norton - but there are a few specimens of some historical value, Semmon sent a few, also Orentt and Mrs. Ames and Mrs. Austin Eaton sent a collection of ferns. - The Herb. dates back to 1880 - at that time as in the eighties the things of value were acquired. Prof. D.R. Hood is promoting the transfer - since there is no one there to care for it.

San Jose, Apr 29, 1903

- Went to call on <sup>Volney</sup> Rattan. who is now in the High School, having lost his place in the State Normal on account of the McKenzie political gang. Rattan is a schoolmaster, first of all, medium height, slender build, thinish face, complexion gray or almost white, hair gray but he is now nearly bald. He has a pleasant manner. Says he came to California in 1861 with 16 other young men. Was in Wisconsin State University but did not graduate. "Crossed the plains" and was the cook of the party. Was the only one of



## San Jose

the sixteen who did not lose weight, in fact he gained 20 pounds. Attributes this to the fact that the journey was to him intensely interesting on account of his interest in natural history; it was to him a great pleasure trip; he was disappointed as are all travelers in the Rocky Mts. But the Wahsatch was a delight. In the Smith Pass he saw the great snow peaks north and south, - *Aquilegia scopulorum* the white form, six feet high! Settled in Placerville. Later at Santa Cruz. The position

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in the San Francisco Girls High he obtained on account of his "little botany". The 3 subjects were Physics Chemistry and Botany. Sweet spoke for Rattan on the Physics & Chemistry but knew nothing about his ability to teach Botany when Bolander spoke up and declared he knew all the necessary botany! The job was worth \$24.00 per year. Rattan regrets he did not collect assiduously in the series when teaching there, but the idea that botany was only a recreation and that



## San Jose

he was already giving too much time to a recreation which would never bring him in any money was always a restraining influence. He saw Gray at Cambridge about 1887. Gray wanted him to sit down and study a year in his laboratory, but he felt that he could not afford such a play-day. He saw his mistake later. Gray gave him a letter to Sir Joseph Hooker when he went to London.

in 1861

Everybody thought that the Survey would soon

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get out a California Botany. It was expected in three years. Bolander promised later to write a flora when he was rid of the cares of the State office which he held. But Bolander went away. The Bancrofts, wanting to hold the local field, approached Dr. Kellogg who said he would furnish the mss for \$1000. Of course they wouldn't consider that and finally struck a bargain with Rattan and the popular California Flora appeared in 1881, the author



## San Jose

getting a royalty on sales.  
His drawing for the 2d ed.  
were made directly on  
box wood and the engraver  
worked directly on the lines.  
The cost of the Poppy  
Family cost \$16.00!!

Photo-engraving in those  
days had not furnished  
a cheap method of  
reproduction.

• Made 3 trips into Humboldt  
Co. Discovered *Collinsia*  
*Rattani* near Hupa Valley;  
also *Collinsia* [linearis?] or  
[*Collomia*?]. The peculiar  
*Pentstemon Rattani* he  
found at or near Kneeland

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Prairie - very abundant under  
the Douglas Spruce. The only  
other place he found it  
was on the trail down to  
Mad River near John Julius.  
He discovered 3 new species  
at Fort's Springs and  
regards this as still  
an unexplored region.  
The new sp. were *Hemulus*  
*Rattani*, *Astragalus Rattani*  
and ————, (or perhaps  
I am mixing these with  
the northern species. I think  
he noticed *Astragalus Rattani*  
near Black Butte. In any  
event he found *Collinsia*  
*Greenei*!! on Black Butte, but



## San Jose

it was interesting that the mountain on the west and east sides held two forms differing strikingly in color but not in the least structurally - the west form was deep blue(?) and the east form lavender(?).

It took Mr. Rattan some time to understand who I was. He said that he had pictured me as a very different person.

Mr. G. Nelson

309 Park Ave

San Jose

- Nelson Tannery -

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- Mr. Nelson (Durde) of the San Jose Tannery says that he regards the Tan Oak bark in the Santa Cruz Mts as nearly exhausted. Three or four years ago he had some of the Monterey bark. Says he uses some Live Oak bark. Mixes it with the Tan Oak bark. Will not do well alone. It contains as much tannin as Tan Oak and tans as well but renders the leather "gritty". The shoemen can't keep their knives sharp and accuse him of filling the hides with sand which is



## San Jose

as every one knows of course  
 absurd. He says this is  
 not the Live Oak of the  
 Valley level (*Quercus agrifolia*), nor is it Black  
 Oak (*Quercus Californica*)  
 - he seems to know this.  
 He has used Black Oak,  
 too, for tanning I understand  
 Live Oak bark varies -  
 that on the ridges is fine,  
 marked by white blotches  
 - that in the gulches is  
 poorer and dark. These  
 two differ in tannin percent.  
 There would be an in-  
 exhaustible tanbark supply  
 if they would keep the  
 fire out. The fire is what

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does the business. Only  
 one tannery in San Jose,  
 one in Santa Clara, one at  
 Santa Cruz (Kron Tannery),  
 Two at Redwood, one big  
 one, largest in the state. Pay  
 \$16 to 18 per cord (1902) here  
 at San Jose. For reproduction  
 the peelers should not trim  
 down so close the heels of the  
 trunk; doesn't give the  
 sprouts a chance. The  
 Live Oak follows the Redwood  
 and care of the Redwood  
 would mean care of the  
 Tanbark Oak. Keep out fires.  
 Live Oak wood is valued for  
 fuel, but it doesn't leave  
 coals as other oaks do which



## San Jose

have the bark left on. The  
 Chimere like it. Why? Well  
 the Chimere are a thrifty  
 careful people and not  
 like the wasteful Americans.  
 The tan oak wood is straight  
 grained and can be  
 split easily into small  
 pieces. If brought in green  
 and barked it can be  
 kept all right. But the  
 best wood is the live oak  
 of the mountains. Much  
 better than valley, whether  
 white, black or live.  
 Moreover wood from the  
 nuts cost less than  
 more than wood from the  
 East (Mt. Hamilton Range).

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Redwood of Santa Cruz is  
 harder and more brittle  
 than that from Stumboldt  
 - the latter grows faster &  
 is softer and straighter  
 grained. That is why it  
 is preferred.

- 
- Salix laevigata Bebb on Alviso  
 Creek in City of San Jose.
  - Populus Fremonti also.



## Santa Clara

Jacob Ebhard says second-growth  
tambark has been peeled in the  
Santa Cruz Mts 1 in. thick. That  
being the oldest district is the  
only place where we should  
expect to get second-growth. He  
thinks 20 or 30 years sufficient  
to produce a second crop.  
He gives me a sample of second-  
growth  $\frac{1}{2}$  in. thick which he  
is enabled to pick out of a  
miscellaneous pile by its  
smoothness. He says bark in  
the ridges is rich in tannin;  
bark from the deep gulches  
is poor in tannin. This holds  
as true in the Santa Lucia  
Mountains as elsewhere  
- he cited a particular case

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- the name being gone from  
me at the moment and  
yet was (I thought) familiar  
when he spoke it. Bark from  
the very base of the trunk is  
richest in tannin. Where  
the tree is shaded by the redwood  
it is poor in tannin. 16 yrs ago  
they were using 20000 cords  
a year and they are not using  
much more than that now.  
The supply depends on the opening  
up of cheap means of transportation  
by new roads and new roads  
are built to get out the lumber  
of the redwood - they would not  
build a road for the tambark  
alone.



## Santa Clara

In the tannery pile at Ebhardt Tannery he also pointed out Black Oak pieces and Live Oak pieces - the sticks being indiscriminately mixed. Some of these contain as much tannin percent as the Tan Oak. He says the Live Oak is the same as on the valley level. - that is I take it *Quercus agrifolia*. He thinks the Tan Oak about gone from the Santa Cruz - "good deal in the Pescadero region - 4000 cords - He has 400 cords near the Big Basin on Bark Ridge. Plenty in the Big Basin. 2 cords per acre in the Santa Cruz district.

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Scarp he has seen ridges in Humboldt on the E. that would yield 10 cords per acre straight along. Says the railroads carry bark to Portland from San Francisco for \$3 per cord. He showed me a piece of bark from the Santa Lucia Mts that was 3½ in. thick. He spent bark on chemical analysis shows 3 per cent tannin. When the ends of the ~~top~~ sticks exposed to the air show black or dark red that is a sign of a high percent tannin. If they will keep the fire out there will always be a good supply of second-growth bark altho not as rich in tannin percent.



## San Jose

- H. T. Gillispie, Hardwood Planing Mill, 78 Orchard St, res. 441 W. San Fernando. Foreman, Mrs. Porter. Has used tan oak wood, says it is no good when cut at the time of bark peeling. Should be cut in Aug or Sept. He bores get into it. Rot very quickly. Sent some to the White Sewing Machine Co, Columbus, Ohio. They liked the sample and wanted some more. It is a white wood and looks beautiful. He did nothing further with it. Gillispie is now crazy on Eucalyptus globulus and has a second mill on San Fernando St near narrow gauge depot where

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he is sawing up Blue Gum logs. Here is the beginning of a new industry! At last a way of utilizing the great numbers of Eucalyptus trees has been found. Gillispie is a Maine Yankee with a keen dark blue eye under shaggy eyebrows, a pleasant wrinkle in them, and an open sort way of smiling and a head covered with close gray hair. I should guess he might be past sixty. As a result of his long years of work with hardwoods his Yankee ingenuity has at last, come into his own. He is a believer in the wood of the Blue Gum. This is not a



## San Jose

passing fancy But is a firm conviction founded on many years of experimenting with this tree. The wood is hard as every ~~one~~ <sup>boy</sup> knows who has tried to cut up a Blue Gum tree into firewood. That small boy will gather his flax today and cut his Blue Gum sticks into firewood when the wood is green if he be wise. But in the second place the wood is tough and this just when the prejudice comes. Most people can't believe that Blue Gum is both hard and tough. It grows too fast say they. Well concrete is pretty hard

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and it is made very quickly - granite is hard and was a long time in the making. Anyway Blue Gum is being used in place of oak, when oak cannot be had - and it is being used <sup>now</sup> just as if it were oak. They make wagon-poles out of it. And bolsters - and wagon ~~frames~~ <sup>frames</sup> - and reaches. Harrow beams Plow shafts, wagon seats and especially the side supports beneath the seats  on the ends which get a good deal of wear and tear. I saw pieces being turned out into contributions boxes or rather plates - the Methodist Church of the town had ordered a dozen



## San Jose

and very handsome they were too. Teeth for the hay-buck rakes.

This wood is usually steamed. It is boiled in water first which takes the sap out so that it dries better in the kiln.

But above all it is used for poles of the power-conducting lines or lines. Insulators. For this purpose the only wood that will stand the racket. These pins are boiled in linseed oil before delivery to the electric companies. This is a very great item and their use is being extended beyond California.

Blue gum is used where no other wood is available where

April 30, 1903.

especial toughness is required. The manufacturers of harvester teeth require a wood of very great toughness in their trip hammers - Hickory hasn't proved satisfactory but Blue Gum fills the bill. There is a decided difference in Blue Gums - the ironwood form is yellowish in cast, the ordinary form is white. Look how that is woven together, said Gillispie, pointing to the exposed fibres beneath the bark. Now the great advantage of this from the forester's standpoint is that the Blue Gum reproduces itself by suckers - and a



## San Jose

particular tree that is found to produce the highest class wood can be allowed to grow again, while the poorer forms can be taken out if desired. It takes about 30 years to grow a log of 3 or 4 ft. diam. for the mill.

Gillispie also buys locust trees and cuts the wood into pins for ship-building at S.F.

Says Eucalyptus in open or on steep furnishes tougher wood than that grown in groves - the latter grows taller and faster.

April 30, 1903.

Jacob Eberhard,  
Eberhard Tannery  
Grant St. opp. Santa Clara,  
Santa Clara.

Volney Rattan,  
#686 N. 16th St. San Jose,

C. Cary says Insulator Pins made from Eucalyptus are better than oak just as steel which is somewhat tempered is better than cast iron. Eucalyptus is hard and strong and not brittle. It is not so good as hickory.

- "Burr Oak". People of sw. Oregon call Tan Oak by this name, see Clay Blake tests Ralph Platt.



## Tan Oak.

Samples sent Sudworth

- No. 1. Tan Oak bark, Briceland, Aug. 1902  
 No. 3. Tan Oak acorns, Santa Cruz Co.  
 No. 20. Tan Oak bark, Low Gap, <sup>Trunk 6 in diam.</sup> Aug. 10, '02  
 No. 4. Thick-bark Tan Oak from region above Korbel, Thos. Devlin Tanning Co., Arcata. Feb. 1903  
 No. 5. Ditto, Paper-bark Tan Oak.  
 No. 6. } Redwood } ↔ Thick bark } Record  
 No. 7. } Area at } ↔ Medium " } Feb. 1903  
 No. 8. } Greenwood } ↔ Thin " } Merriam Bros.  
 Sent to Wash. - Mar. 24, 1903.  
 No. 9. - Redwood bark, Ft. Bragg.  
 No. 10. " wood. " sap. Mar 1902  
 No 11 " " " heart.  
 All Union Lumber Co.  
 No. 12. *Quercus lebbala* bark from basalia, G.W. Stewart Mar. 1903.  
 No. 13. *Quercus densiflora* - ground

Samples sent Sudworth.

- <sup>bark</sup> as found in market. From San Francisco through Merriam Bros.  
 No. 14. *Quercus densiflora*, Eberhard Tanning Co., Santa Clara, from Santa Cruz Mts.  
 No. 15. Ditto, second growth, acc. Eberhard.  
 No. 16. *Quercus agrifolia*, Berkeley. Fallen tree somewhat riddled by borers. <sup>other open to be secured later.</sup>  
 No. 17. *Quercus californica*, Vaca Mts. W.H.J. May 3, 1903.  
 No. 18. *Quercus chrysolepis*, ditto.  
 No. 19. *Quercus wislizenii*, ditto.  
 No. 20. *Quercus densiflora* wood from Briceland (Chas. Wagner). May 20, '03  
 No. 21. *Salix lasiandra*, Berkeley. W.H. Japson, May 20, 1903.  
 No. 22. *Quercus densiflora*. Baluster cut, from Cottrell's Planning Mill, 14 yrs. old. Nos 22 & 23 sent May 30, '03  
 No. 23. Cut from outside of standing peeled tree. Near Kenney, Aug. 1902.



Samples Sent Sudworth.

No. 24. Tanbark Extract. California  
Tanning Extract Company, Meridian  
Bro. Greenwood, Calif. - Nov. 1902.  
W.L. Jepson.

Oakland, April, 1903. - Redwood  
- Constantly growing in favor as  
a wood. When California Door  
Co. first began manufacturing  
doors of redwood they could  
scarcely give them away.  
Now one sees Redwood doors  
everywhere. Far outside doors  
their life is longer than pine  
or oak since they will not  
warp or twist as do  
the latter woods. - Mr.  
Walter Kellogg.

Ukiah Memoranda  
- Billy Lynch, tan-bark expert.

- At close of one of Opie Reid's evening  
bond over-zealous parents wanted  
him to hear their little prodigy sing  
play. Mr. Reid was so sorry at it  
he had to catch an early morning  
train. But train doesn't go till 11.00. Yes,  
but must take early morning freight.  
But that is fast freight and doesn't  
stop. Ah, but Supt. is friend of mine  
and I've asked him to do it so I may  
get next date. But I don't see how  
that can be. I'm the agent and no-  
body has wired me. To tell the  
truth I'm a liar. Bring the little  
girl around to the hotel at 9.30!



## San Diego Memoranda -

- Purpus plants donated by K.B.?

- A graduate in law wrote to a prominent Arkansas lawyer asking for an opening in his section: "I am a Republican in politics and an honest young lawyer." Reply:

"If you are a Republican the game laws here will protect you and if you are an honest lawyer, you will have no competition."

## Addresses of Californians

- Mr. Henry Heath, Mr. Alexander, Bank of Chico (through Miss Brane).
- Mr. Watkins, 427 Montg'y (Photos)
- Miss Nellie Vance, 1028 N. El Dorado. <sup>Stockton.</sup>
- Ed. Mainwaring, Dunlap P.O. Fresno Co. will collect seeds of natives in higher foothills.
- Dr. E.S. Park, 807 Sutter st., S.F.
- Ellis M. Castner, Elk (Greenwood). Calif.
- Notley Bras, Monterey. (Lambark)
- T. J. Gillispie, Planing Mill, Orchard st., San Jose. <sup>S.F.</sup>
- Miss Rosenberg, 1194 O'Farrell st., <sup>S.F.</sup> Calif.
- Bertha Chapman, 120, E-14th st, Oakland.
- Miss Alice J. Swasey, 224 - 9th st, Oakland, Prin. <sup>Fruitvale School #1</sup>
- Mr. Joseph Shum, Miles, Calif.
- Mr. John Rock, Miles, Nig's, Calif. Nursery Co.
- A.E. Kellogg, Prin. Hamilton Gram. S.F. (trees).
- E.M. Smith, Kenwood (Insurance man). Sent <sup>118 Dev. st.</sup> *Gilia dichotoma*.



## Southern Californians

- Abigail Page, 125-4th st. Redlands. wants  
text to take up study of California wild fls.

- Mr. Harry O Melviny, L.A. (Civil Serv. Com.)
- Rev. Mr. Robertson, Mentone <sup>(large coll. dried  
pl. acc. Williams)</sup>
- Fred. M. Reed, 547 Chicago Ave., Riverside

- *Lonicera laeta* Jepson, M.S.  
see file 1903, May. =  
better *L. utahensis* Wats.

## Collaborators, S. Calif. Flora.

- Mrs. Blanch Trask, Avalon.
- C. E. Hutchinson, 2431 Mich. Ave. L.A.
- Miss H Grace Eaton, Redlands.
- Ernest Brauntton, 203 New High, L.A.
- Mr. Robert D. Williams, Box 14, Claremont
- Miss E. D. Palmer, 407 W. 23rd st., L.A.
- Geo. B. Grant, 637 Summit Ave., Pasadena.
- Ernst Dolge, 810 S Grand Ave.,  
P.O. Box 184, Los Angeles, Calif
- Miss Ruby Warner, Needles, Calif (teacher)
- Miss Harriette W. Smith, Covina, Calif.
- Dr. Walter Lindley, 144 S. Hope st., L.A.
- ~~Prof. D. R. Wood, State Normal, San  
Jose (Biology Teacher).~~



## Botany 4 Records

- *Quercus agrifolia*. Stamens <sup>1903</sup> = 4 + 5,  
and perianth 3-cleft, Miss Reitzfeld

Stamens = 4 to 7, Miss Widd.

Average time for pollen to  
fertilize ovule = 19 days, Miss

Georgia Rattan

*Pinus Coulteri*, 52, 46 etc catkins  
in staminate cluster.

Average = 40 Miss Swain.

*Pinus Sabiniana*. Staminate  
catkins in cluster = 18, 20,  
21, 23, 25, 27, 35 = average =  
22. Miss Swain.

- *Lobelia splendens* Willd. Cinega  
near Los Angeles, Greata, acc. Hall  
in letter file, 1903.

- *Palmerella debilis* var *serrata*  
Gray, along all streams in the  
hills back of Los Angeles, Greata,  
acc. Hall in letter file, 1903.

## Photo Record.

Spool No. 6 - 61. 62 Brickyard at  
Bruceland Extractor

63. 4-horse load Tanbark

64. School at Merce

65. Homes at White Thorn

66. 67. Redwoods at " "

68. Fire-burned Redwood with  
new growth, Kenney

69. Redwood group. Pat Kenney

70 - Usal, + vessels.

71 - Usal, redwoods.

72 - Under track, Berkeley

Spool. No. 8. 1. Tanbark pile, Greenwood

2. Bishop Pine, "

3. Extractor Plant

4 " "

5 " "



- Berkeley, Mar 11, 1903.

- Valley Oak, seedlings very thrifty. Leaves very broad + little lobed, carried far apart by growth of shoot.
- Oregon Oak (*Quercus garryana*)  
Seedlings very slow in growth.  
Two in. high, whilst *Q. lobata* is as much as 7 in. h. in one case. Leaves more lobed and almost rosette-like at top of shoot.
- *Quercus dumosa* - Leaves broad, very springy for young leaves. Thrifty but not of rapid growth.  
All the above cult.  
seedlings.
- *Arbutus menziesii* - true Madroña. See Klee in. Agr. Rep. U.C. 1884.



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[illegible]